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ABSTRACT

Good programming in public television requires adequate funding; adequate funding requires an understanding of the total public television station picture. This study provides information concerning projected operating characteristics and the resultant costs of these operations for public broadcasting stations. After a discussion of the procedures of the study, results are presented under sections which parallel the six control variables developed in the questionnaire used to collect data from broadcasters: operational time schedules for 1971, 1972, and projected for 1976; local program needs projected for 1976; local program costs; local broadcast costs; optimal funding mix; and personnel, operational, and capital equipment costs. Each set of data is analyzed over variables such as respondents, ownership, market size, and total operational budget. (SH)

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OPERATIONS & COSTS

A STUDY OF EDUCATIONAL PUBLIC TELEVISION STATIONS



REPORT

OHIO UNIVERSITY BROADCAST RESEARCH CENTER

JAMES A. ANDERSON, DIRECTOR

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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JANUARY 1973

TABLE OF CONTENTS

Introduction	1
Procedures	2
Time Schedule	2
Analytical Methodology	2
Criterion Variables	3
Development of Control Variables	3
Analysis of Criterion Variables by the Six Control Variables	4
Data Handling	5
Results	6
Return Percentages	6
Sectional Analysis of the Questionnaire	7
Section One: Operational Time Schedules 1971, 1972, 1976	7
Operational Time Schedules, 1971, 1972, 1976--Over All Respondents	8
Projected Weekend Service for 1976	11
Operational Time Schedules 1972, 1976--Over Ownership	13
Operational Time Schedules 1972, 1976--Over Market Size	19
Operational Time Schedules 1972, 1976--Over Total Operational Budget	23
Section Two: Local Program Needs, 1976	27
Local Program Needs, 1976--Over All Respondents	28
Local Program Needs, 1976--Over Ownership	28

TABLE OF CONTENTS (Cont'd)

Local Program Needs, 1976--Over Market Size	33
Local Program Needs, 1976--Over Operational Budget	33
Section Three: Local Program Costs: Fixed, Variable, and Total	36
Local Program Costs: Fixed Variable, and Total--Over All Respondents	36
Local Program Costs: Fixed, Variable, and Total--Over Ownership	38
Local Program Costs: Fixed, Variable, and Total--Over Market Size	40
Local Program Costs: Fixed, Variable, and Total--Over Total Operational Budget	40
Local Program Costs: Fixed, Variable, and Total--Over Available Facilities	43
Section Four: Local Broadcast Costs	44
Local Broadcast Costs--Over All Respondents	46
Local Broadcast Costs--Over Ownership Groups	46
Local Broadcast Costs--Over Market Size	46
Local Broadcast Costs--Over Operational Service Time	50
Section Five: Optimal Funding Mix	52
Optimal Funding Mix: Over All Respondents	52
Optimal Funding Mix: Over Ownership	53
Section Six: Personnel, Operations, Capital Equipment, and Depreciation Costs 1971, 1972, 1976	54
Personnel, Operations, Capital Equipment, and Depreciation Costs 1971, 1972, 1976--Over All Respondents	55

TABLE OF CONTENTS (Cont'd)

Non-Salary Operation Costs 1971, 1972, 1976--Over All Respondents	57
Personnel, Operations, and Capital Equipment Costs 1972, 1976--Over Ownership	57
Non-Salary Operation Costs 1972, 1976--Over Ownership	59
Personnel, Operations, and Capital Equipment Costs 1972, 1976--Over Market Size	64
Personnel, Operations, and Capital Equipment Costs 1972, 1976--Over Operational Service Time	64
Personnel, Operations, and Capital Equipment Costs 1972, 1976--Over Available Facilities	67
Summary	70
Section One: Operational Time Schedules 1971, 1972, 1976	70
Section Two: Local Program Needs, 1976	71
Section Three: Local Program Costs	71
Section Four: Local Broadcast Costs 1972, 1976	72
Section Five: Optimal Funding Mix	72
Section Six: Personnel, Operations, Capital Equipment, and Depreciation Costs--1971, 1972, 1976	72
Conclusions	73
All Respondents	73
Ownership	73
Market Size	75
Total Operational Budget	75
Operational Service Time and Available Facilities	76
Appendix A	
Questionnaire and Covering Documents	77

INTRODUCTION

Throughout public television's history, considerable emphasis has been placed on programming studies. Questionnaires relating to what programming services should be offered, the effectiveness of such services, and so forth have abounded. While programming has taken the survey spotlight, basic issues relating to facilities, personnel, operating costs, program source mix, and optimum hours of operation have continued to be the foundation upon which a programming service will stand or fall.

Good programming requires adequate funding; likewise, adequate funding requires a good understanding of the total public television station picture. The study reported here helps to complete that picture by providing information concerning projected operating characteristics, and the resultant costs of these operations for public broadcast stations.

To provide this information, the National Association of Educational Broadcasters, Educational Television Stations Division (ETS), developed a six-part questionnaire for distribution to its members. The six sections represented in the questionnaire include 1) Operational Time Schedules; 2) Program Needs for Local Production; 3) Program Costs; 4) Local Broadcast Costs; 5) Optimal Funding Mix; and 6) Personnel, Operational, and Capital Equipment Costs. Following the development of the questionnaire, the project was turned over to Ohio University's Broadcast Research Center for preparation, distribution, and analysis of the questionnaire. The Broadcast Research Center's procedures, analyses, and interpretations follow.

PROCEDURES

TIME SCHEDULE

Initial time schedule for this project called for the mailing of the questionnaires by 21 September 1972 with follow-up procedures to be completed by 23 October. The final report was to be delivered by 27 November 1972.

Three major circumstances disrupted that time schedule substantially. 1) The questionnaire underwent substantial revision after pre-testing by NAEB/ETS.

As a result, the questionnaire was mailed 13 October 1972 with the request that all returns be made by 23 October. 2) Once the questionnaire was in the field, it became apparent that the time requirements for its completion were considerably longer than predicted. On November 6, 7, and 8, each non-returning station was contacted by telephone. During that contact, it was determined that almost all stations were willing to complete the questionnaire, but that they would need at least 30 working days to complete it.

3) Many of the public stations follow the academic calendar; as a result, some staff members had time off during the traditional recesses of November and December. With the additional time necessary for the NAEB Convention, 30 working days translated into several weeks of calendar time.

Due to these circumstances, the return schedule was expanded, with a final cut-off date of 17 January 1973. In spite of this extension, the complexity of the questionnaire prevented several stations from meeting even this deadline.

ANALYTICAL METHODOLOGY

The procedures of analysis are presented below under the headings of

criterion variables, development of control variables, analysis of criterion variables by the control variables, and data handling.

Criterion Variables

Criterion variables were, for the most part, the data which were taken directly from the questionnaire. The variables, then, are the weeks, days, hours, dollars, and percentages as provided by the respondents.

In some instances, transformations were conducted on the respondent-supplied values. These transformations were primarily the changing of percentages of a day into hours, the calculation of totals, and the combination of two categories for greater clarity.

One major set of scores was constructed--the per cent of change scores. These scores were calculated when 1972 and 1976 values were available for the purpose of illustrating the changes projected for 1976.

All criterion variables were summarized over all respondents and were broken down by six control variables. The descriptions of these follow.

Development of Control Variables

Six control variables were developed to more thoroughly interrogate the data. Those variables were ownership type, size of market location, total operational budget, available facilities, operational service time, and hours of local production.

Classifications used under ownership type were: University, Community, School System, or State licensee. Categorization of the respondent licensees was done by ETS.

Market size categories were taken from American Research Bureau data. Markets were divided into three groups: Markets 1 to 25, averaging 1,257,300 TV households, Group 1; 25 to 100, averaging 284,800 TV households, Group 2;

and markets 101 and above, averaging 74,500 TV households, Group 3. Stations in markets not listed by ARB, and stations in State networks were categorized according to estimates of their respective potential audiences.

Four groups of stations were devised from 1971 CPB data, thereby giving the total operational budget value. The cutting points used to give equal groupings were less than \$250,000; \$250,000 to \$500,000; \$500,000 to \$900,000; and more than \$900,000.

Available facilities' categories were also drawn from 1971 data gathered by the Corporation for Public Broadcasting. Each respondent station was checked for the availability of live color, video tape recording in color, and remote production capabilities. Stations were sorted into three groups according to the availability of none or one of the facilities, two of the facilities, or all three facilities.

Operational service time values were developed from 1972 data as reported in this questionnaire. Those stations operating at least 36 weeks of the year, 6 days a week, and 12 hours per day comprised Group 3. Those stations meeting two of those criteria were in Group 2; those meeting one or none were in Group 1.

Categories for hours of local production were based on 1972 data as returned in this questionnaire. Stations reporting no hours of local production were in Group 1. Those with up to 3.0 hours were in Group 2; stations with more than 3.0 hours of local productions were in Group 3.

Analysis of Criterion Variables by the Six Control Variables

Each criterion variable in each section of the questionnaire was broken out over the categories of each of the six control variables. Each of these crossbreaks was then examined for the appearance of patterns of relationship.

Those control variable analyses which exhibited recognizable patterns were

included in the sectional report. This procedure was adopted due to the lack of substantive information concerning the activity of the criterion variables. By analyzing all data, unsuspected but existing patterns would be identified.

Data Handling

All data were keypunched and verified as received. All data analyses were conducted via computer routines developed specifically for this project. Computer programs were verified by known data, and by at least one hand operation. Where inferential statistics were appropriate, the .05 level of significance was used.

RESULTS

RETURN PERCENTAGES

Questionnaires were sent to 133 licensees of operational television stations who were also members of NAEB/ETS. Of that number, 62 licensees representing 113 transmitters completed a questionnaire for a return of 47 per cent.

Naturally, any return of less than 100 per cent raises the question of differences between returning and non-returning licensees. Since analyses of non-returned questionnaires are impossible, checking the respondent pool for possible source biases is our best recourse. Table 1 presents the distribution of returning licensees according to the control variables of ownership and market size. The cutting points of these values were developed a priori, which would make them sensitive to unusual distributions.

TABLE 1

Control Variable Ownership	Categories			
	University	Community	School	State
	26%	34%	18%	22%
Market Size	1-25	26-100	101 and above	
	21%	37%	42%	

Table 1--Per cent of respondents in each category for the control variables of ownership and market size.

As can be seen from Table 1, the distribution of stations appears well within expectations. In ownership, for example, the total population

percentages for the four categories are 35 per cent University-owned, 36 per cent Community-owned, 14 per cent School System-owned, and 15 per cent State-owned. These population figures do not differ significantly from our sample results.

SECTIONAL ANALYSIS OF THE QUESTIONNAIRE

Following the analytical scheme outlined under Part I, each section of the questionnaire was subjected to its individual analysis. These analyses follow in order.

SECTION ONE: OPERATIONAL TIME SCHEDULES 1971, 1972, 1976

The first section of the questionnaire concerned information relevant to the weeks of the year, days of the week, hours of the day, and the program mix of full schedule operation. Data taken from the CFB Questionnaire were presented for 1971; respondents were asked to complete the items for their 1972 operations, and project the scope of their full schedule operations to their optimal plan for 1976.

A subsection was included which collected information specific to Saturday and Sunday operations. This subsection was provided for those stations whose weekend operation would differ substantially from their weekday operation.

Analysis of Section One is presented in five parts: 1) The analysis of full schedule operation variables and per cent of change scores for 1971, 1972, and 1976 over all respondents; 2) the analysis of projected weekend service over all respondents; 3) the analysis of 1972, 1976 full schedule operation variables and per cent of change scores over ownership; 4) the analysis of these data over market size; and 5) the analysis of the operation variables and change scores over total operational budget values. These analyses follow.

Operational Time Schedules, 1971, 1972, 1976--Over All Respondents

Table 2 presents the mean scores and the range¹ for each of the values relating to full service operation for 1971, 1972, and 1976. Table 3 presents the per cent of change² scores and range for each operational value. Inspection of Table 2 shows a steady increase in almost all categories of broadcast service from 1971 to 1972 and projections of even greater increases in 1976. According to figures supplied by the Corporation for Public Broadcasting for 1971, and those supplied by the responding stations for 1972, Public Broadcasting added almost one full month of full service operation in 1972 and increased national interconnect time by almost three-quarters of an hour per day.

Station projections for 1976 show a 12-week increase in service over 1971. Full service is to be provided, with few exceptions, 48 weeks per year, every day of the week, 16 hours per day. This is an average increase of one day per week and over three hours per day. The largest increase in terms of

¹For those whose expertise is in areas other than data analysis, a few rules of thumb might be useful in interpreting the data. The mean is the arithmetic average (the sum of the scores divided by the number of scores). It is perhaps the best single number which can be used to describe a set of numbers. A few extreme values, however, within the set of numbers can shift the mean up or down the scale. The range, which is the lowest value subtracted from the highest value in the set, helps one get a feel for the spread of the numbers in the set. It allows the reader to catch the existence of extreme values within the set which might be distorting the mean value. For example, in Table 2, the range for days of full service for 1971 is six. Since we know the upper end to be seven, at least one station had to report only one day per week of full service. Inspection of the raw data verified this as a bona fide occurrence. In relative terms, then, the more narrow the range, the more descriptive the mean score is of all the numbers in the given set.

²Per cent of change scores were calculated for each station by dividing the 1972 value into the 1976 value, multiplying by 100, and subtracting 100. As the per cent of change scores are calculated for each individual respondent, the changes can be substantially different than the changes reflected in the mean 1972 score and the mean 1976 score. Calculating the per cent of change score individually is more representative of the impact of projected changes on the station. However, when the 1972 values are relatively low, a small increment of units (say hours) will result in a very large per cent of change score. For example, Station WXXX provides .50 hours of local production in 1972 and projects 1.5 hours for 1976 which is calculated as a 200 per cent increase.

TABLE 2

		1971	1972	1976
TOTAL RESPONDENTS				
FULL SCHEDULE OPERATION TIMES:				
(1) NUMBER OF WEEKS PER YEAR*		MEAN: 1 RANGE: 1	35.80 22.00	40.28 42.50
(2) NUMBER OF DAYS PER WEEK		MEAN: 1 RANGE: 1	6.13 6.00	6.27 2.50
(3) NUMBER OF BROADCAST HOURS PER DAY		MEAN: 1 RANGE: 1	12.65 11.50	12.78 15.00
(4) HOURS OF LOCAL PRODUCTION		MEAN: 1 RANGE: 1	2.76 8.69	2.55 8.80
(5) TOTAL TAPE OR FILM HOURS		MEAN: 1 RANGE: 1	5.13 13.77	5.83 13.90
(6) HOURS LOCAL PRODUCTION REPEATS		MEAN: 1 RANGE: 1	***** *****	***** *****
(7) HOURS INTERCONNECT DELAY		MEAN: 1 RANGE: 1	***** *****	***** *****
(8) HOURS PROH SYNDICATION		MEAN: 1 RANGE: 1	***** *****	***** *****
(9) TOTAL INTERCONNECT HOURS		MEAN: 1 RANGE: 1	5.23 13.02	6.01 12.00
(10) REGIONAL INTERCONNECT HOURS		MEAN: 1 RANGE: 1	0.72 13.86	1.07 10.50
(11) NATIONAL INTERCONNECT HOURS		MEAN: 1 RANGE: 1	3.48 7.06	4.23 7.30
(12) OTHER INTERCONNECT HOURS		MEAN: 1 RANGE: 1	0.91 8.98	0.59 7.10

*For a more thorough description of these categories, please see the questionnaire in Appendix A.

TABLE 3

TOTAL RESPONDENTS		MEAN:	27.33
FULL SCHEDULE OPERATION TIMES: 1976/1972		MEAN:	447.37
(1)	NUMBER OF WEEKS PER YEAR	MEAN:	11.76
(2)	NUMBER OF DAYS PER WEEK	RANGE:	40.00
(3)	NUMBER OF BROADCAST HOURS PER DAY	MEAN:	33.32
(4)	HOURS OF LOCAL PRODUCTION	MEAN:	174.99
(5)	TOTAL TAPE OR FILM HOURS	RANGE:	1161.54
(6)	HOURS LOCAL PRODUCTION REPEATS	MEAN:	100.98
(7)	HOURS INTERCONNECT DELAY	RANGE:	962.72
(8)	HOURS FROM SYNDICATION	MEAN:	226.11
(9)	TOTAL INTERCONNECT HOURS	MEAN:	34.61
(10)	REGIONAL INTERCONNECT HOURS	MEAN:	291.78
(11)	NATIONAL INTERCONNECT HOURS	MEAN:	11.09
(12)	OTHER INTERCONNECT HOURS	MEAN:	46.93
		RANGE:	318.55

percentages within these service times will occur in the local production category, the 1976 projection of which is 175 per cent of the 1972 value. This projection is for the optimal plan, which makes a number of assumptions apparently not presently met as the hours of local production actually decrease between 1971 and 1972. Total interconnect time increases for 1976 by 34 per cent, with the greatest percentage increase occurring in the regional interconnect category (291 per cent). Tape/film hours will increase by 100 per cent. The programming mix projections, then, for 1976 are balanced among the major categories of program services--local, tape/film, and interconnections. Surprisingly, national interconnect time shows little increase (11 per cent) over its present (1972) values. The increased full schedule service projected for 1976, therefore, is seen to be an increase in localized programming.

Projected Weekend Service for 1976

Those stations reporting that their weekend broadcast service would be substantially different from their weekday service were asked to complete Section 1a of the questionnaire which collected descriptive information about weekend service. Table 4 presents the mean scores and range for each of the operational time variables as reported for Saturday and for Sunday. Inspection of that table shows a decrease in total broadcast hours for those days, and a substantial increase in the use of network programming sources. In excess of 70 per cent of all programming is projected to be from various network sources. Naturally, this relationship holds only for those reporting a weekend/weekday difference. While the majority did report a difference, 37 per cent stated that their weekend operation would be essentially the same.

TABLE 4

TOTAL RESPONDENTS			
FULL SCHEDULE OPERATION TIMES, 1976:			
		Saturday	Sunday
(1) TOTAL BROADCAST HOURS		MEAN: 8.23	7.32
		RANGE: 19.00	19.00
(2) HOURS LOCAL PRODUCTION		MEAN: 1.09	0.87
		RANGE: 10.50	10.50
(3) TOTAL TAPE OR FILM HOURS		MEAN: 2.58	2.70
		RANGE: 12.50	13.00
(4) HOURS LOCAL PRODUCTION REPEATS		MEAN: 0.98	1.20
		RANGE: 3.06	3.96
(5) HOURS INTERCONNECT DELAY		MEAN: 1.72	1.78
		RANGE: 10.00	9.10
(6) HOURS FROM SYNDICATION		MEAN: 1.42	1.36
		RANGE: 4.00	3.96
(7) TOTAL INTERCONNECT HOURS		MEAN: 4.80	4.24
		RANGE: 16.00	16.00
(8) REGIONAL INTERCONNECT HOURS		MEAN: 1.70	1.37
		RANGE: 9.00	6.40
(9) NATIONAL INTERCONNECT HOURS		MEAN: 5.80	4.98
		RANGE: 11.00	8.60
(10) OTHER INTERCONNECT HOURS		MEAN: 0.84	0.78
		RANGE: 7.00	7.00

Operational Time Schedules 1972³, 1976--Over Ownership

Table 5 presents the mean scores and the range for each variable and each ownership group for 1972. Table 6 presents the mean scores and the range for each variable and each ownership group as projected for 1976. Table 7 presents the mean per cent of change between 1972 and 1976 for each ownership group⁴.

Inspection of these three tables shows a number of similarities and differences among the ownership groups. At the outset, the number of weeks of full service per year is approximately the same for the four groups in 1972. In 1976, however, the Community and State licensee groups pull away from the more academic calendar-bound University and School System stations--offering 49 weeks of service as opposed to 46 weeks. State licensees projected the largest gain⁵ at 52 per cent.

The number of days per week for 1976 is remarkably stable, although some School System stations reflect the limitation of a five-day broadcast week. With the exception of these School System stations, all other project the seven-day week as optimum for 1976.

³The analyses of the 1971 data were deleted from the control variable breakdowns, as the 1972 data were more representative of the current state.

⁴There are three technical anomalies in these tables: 1) Note that the per cent of change score for other interconnect under Community stations is negative, indicating a decrease in time for these stations. Yet, the mean score for 1976 is 2.4 times greater than that of 1972. This apparent discrepancy occurs because those Community stations presently using other interconnect times report a decrease in the use for 1976, which results in the negative change score. The higher mean is explained by the projection of other interconnection use in 1976 by those Community stations not presently using such interconnections. 2) State regional interconnect hours show decrease in the mean scores, but a large positive per cent of change. The stability of the mean score range suggests that the change is as small as the actual difference indicates. The range of the per cent of change score is very high, indicating the existence of extreme values which distort the average change score. 3) Asterisks appear under State/other interconnects, as no State station recorded any time values in this category for 1972.

⁵This value should be tempered somewhat, as one station was not fully operational in 1972.

TABLE 5

OWNERSHIP			
FULL SCHEDULED OPERATION TIMES: 1972			
(1) NUMBER OF WEEKS PER YEAR	MEAN:	40.56	41.20
	RANGE:	20.00	22.00
(2) NUMBER OF DAYS PER WEEK	MEAN:	6.31	6.58
	RANGE:	2.00	1.00
(3) NUMBER OF BROADCAST HOURS PER DAY	MEAN:	12.59	13.33
	RANGE:	10.50	10.00
(4) HOURS OF LOCAL PRODUCTION	MEAN:	1.37	2.66
	RANGE:	6.26	6.98
(5) TOTAL TAPE OR FILM HOURS	MEAN:	6.44	6.06
	RANGE:	13.40	13.55
(6) HOURS LOCAL PRODUCTION REPEATS	MEAN:		
	RANGE:		
(7) HOURS INTERCONNECT DELAY	MEAN:		
	RANGE:		
(8) HOURS FROM SYNDICATION	MEAN:		
	RANGE:		
(9) TOTAL INTERCONNECT HOURS	MEAN:	5.78	6.90
	RANGE:	11.50	10.50
(10) REGIONAL INTERCONNECT HOURS	MEAN:	0.77	1.70
	RANGE:	6.75	10.50
(11) NATIONAL INTERCONNECT HOURS	MEAN:	4.20	4.28
	RANGE:	6.72	7.30
(12) OTHER INTERCONNECT HOURS	MEAN:	0.80	0.51
	RANGE:	2.97	6.84

TABLE 6

OWNERSHIP		UNIVERSITY		COMMUNITY		SCHOOL		DISTRICT		STATE		LICEN	
FULL SCHEDULE OPERATION TIMES: 1976													
(1) NUMBER OF WEEKS PER YEAR		MEAN:	46.31	1	49.50	1	46.73	1	48.43	1	46.00	1	20.00
		RANGE:	17.00	1	22.00	1	16.00	1		1		1	
(2) NUMBER OF DAYS PER WEEK		MEAN:	7.00	1	7.00	1	6.64	1	7.00	1	7.00	1	0.0
		RANGE:	0.0	1	0.0	1	2.00	1		1		1	
(3) NUMBER OF BROADCAST HOURS PER DAY		MEAN:	15.25	1	16.52	1	14.70	1	16.25	1	10.00	1	5.50
		RANGE:	10.00	1	5.00	1	10.00	1		1		1	
(4) HOURS OF LOCAL PRODUCTION		MEAN:	3.06	1	4.35	1	5.40	1	4.02	1		1	
		RANGE:	6.00	1	10.75	1	9.30	1	8.80	1		1	
(5) TOTAL TAPE OR FILM HOURS		MEAN:	7.47	1	7.18	1	5.30	1	8.60	1		1	
		RANGE:	15.20	1	12.00	1	9.15	1	15.50	1		1	
(6) HOURS LOCAL PRODUCTION REPEATS		MEAN:	0.95	1	1.76	1	2.14	1	2.41	1		1	
		RANGE:	2.40	1	6.30	1	3.81	1	6.00	1		1	
(7) HOURS INTERCONNECT DELAY		MEAN:	2.88	1	2.30	1	1.93	1	2.45	1		1	
		RANGE:	12.48	1	8.95	1	2.25	1	6.00	1		1	
(8) HOURS FROM SINDICATION		MEAN:	3.58	1	1.98	1	2.14	1	3.48	1		1	
		RANGE:	6.14	1	4.70	1	3.84	1	9.25	1		1	
(9) TOTAL INTERCONNECT HOURS		MEAN:	7.11	1	8.03	1	6.55	1	5.92	1		1	
		RANGE:	11.50	1	10.00	1	10.00	1	9.95	1		1	
(10) REGIONAL INTERCONNECT HOURS		MEAN:	1.41	1	2.06	1	1.19	1	1.23	1		1	
		RANGE:	5.60	1	10.50	1	11.91	1	6.00	1		1	
(11) NATIONAL INTERCONNECT HOURS		MEAN:	4.48	1	4.59	1	4.20	1	3.87	1		1	
		RANGE:	5.00	1	11.05	1	6.70	1	7.84	1		1	
(12) OTHER INTERCONNECT HOURS		MEAN:	1.22	1	1.21	1	1.16	1	0.40	1		1	
		RANGE:	5.00	1	6.00	1	4.80	1	2.25	1		1	

TABLE 7

MEMBERSHIP		UNIVERSITY		COMMUNITY		SCHOOL DISTRICT		STATE LICENSE	
FULL SCHEDULE OPERATION TIMES: 1976/1972									
(1)	NUMBER OF WEEKS PER YEAR	MEAN:	16.06	25.50	19.91	52.07			
		RANGE:	44.44	67.74	52.94	447.37			
(2)	NUMBER OF DAYS PER WEEK	MEAN:	11.88	6.48	16.67	15.00			
		RANGE:	40.00	16.67	40.00	40.00			
(3)	NUMBER OF BROADCAST HOURS PER DAY	MEAN:	29.20	24.33	24.08	59.97			
		RANGE:	200.00	87.50	52.38	432.33			
(4)	HOURS OF LOCAL PRODUCTION	MEAN:	237.98	263.31	51.36	75.32			
		RANGE:	907.12	1161.54	150.00	320.00			
(5)	TOTAL TAPE OR FILM HOURS	MEAN:	69.65	101.92	132.18	116.89			
		RANGE:	762.96	864.94	671.43	910.48			
(6)	LOCAL PRODUCTION REPEATS	MEAN:	100.00	100.00	100.00	100.00			
(7)	HOURS INTERCONNECT DELAY	MEAN:	100.00	100.00	100.00	100.00			
(8)	HOURS FROM SYNDICATION	MEAN:	100.00	100.00	100.00	100.00			
(9)	TOTAL INTERCONNECT HOURS	MEAN:	37.86	22.86	45.40	38.33			
		RANGE:	223.53	141.67	134.93	71.43			
(10)	REGIONAL INTERCONNECT HOURS	MEAN:	96.50	82.29	746.09	404.16			
		RANGE:	611.67	443.73	899.47	1206.72			
(11)	NATIONAL INTERCONNECT HOURS	MEAN:	10.28	10.66	15.47	14.31			
(12)	OTHER INTERCONNECT HOURS	MEAN:	51.91	31.87	78.87	81.14			
		RANGE:	254.05	51.43	318.55	318.55			

In terms of number of hours of service per day⁶, ownership groups are ranked as Community, State, University, and School System stations for both 1972 and 1976. In per cent of change, however, State licensees project the largest changes, followed by University, Community, and School System stations.

Hours of local production show substantial differences among the four ownership groups. University stations report and project the fewest number of local production hours, while School System stations indicate the largest. Per cent of change scores show a different pattern; both University and Community stations project more than 200 per cent increases. School System stations project the smallest increase at 51 per cent.

School System stations report and project the fewest number of hours of playbacks, but have the highest per cent of change score. State licensees report and project the highest number of playback hours, and have the second highest per cent of change score. For School System stations, the playback hours are more likely to come from syndication/library or local production repeats. For State stations, syndication or library programs are the most likely source of playback hours. University stations, in spite of their projected change in local production hours, project less than one hour of local production repeats. Their primary source of playback hours will come from syndicated/library programs. Community stations project interconnect delays as their largest playback source.

Total interconnect time will rise for all four groups. Regional and other interconnections account for most of that increase. National interconnect average time actually decreases between 1972 and 1976 for State licensees. The per cent of change is still slightly positive, suggesting

⁶The number of hours per broadcast day is sometimes greater, sometimes less than the total of live, tape/film, and interconnect hours. This discrepancy, and ones similar to it are caused by the fact that not all broadcast days for a single station have the same number of hours. Consequently, the values are averages of averages, which account for the discrepancy.

that the national changes projected are very moderate. As we have seen, the national interconnect time will increase only 11 per cent.

The shifts in programming mix, as projected by the four ownership groups, present an indication of the shape of things to come, and highlight some of the more interesting differences among the groups. In 1972, University stations report 10 per cent of their programming as local production, 47 per cent as tape/film, and 31 per cent as national interconnect (not total interconnect) time. In 1976, they would like to see 17 per cent of their programming as local production, 42 per cent as tape/film, and 25 per cent as national interconnect.

Community stations reported 17 per cent of their programming from local production, 40 per cent from tape/film, and 20 per cent from national interconnect. For 1976, they project 22 per cent local, 37 per cent tape/film, and 23 per cent national interconnect.

School System stations scheduled 31 per cent of their programming from local production, 27 per cent from tape/film, and 33 per cent from national interconnect. In 1976, they project shifting to 31 per cent local, 31 per cent tape/film, and 24 per cent national.

Finally, State stations had 19 per cent of their programming from local production, 44 per cent from tape/film, and 28 per cent from national interconnect. They project 22 per cent local, 47 per cent tape/film, and 21 per cent national.

University and Community stations, then, will decrease (in terms of total time) the importance of national interconnect real time and tape/film playback, increase the importance of local production, and allow more time for regional sources.

School System stations will maintain the relative importance of local production (actual time increases), increase tape/film sources, decrease

national interconnect, and open more time for regional networking.

State licensees will increase the ranking of local production and tape/film sources, decrease the importance (and actual time) of national interconnect, and maintain the present importance of regional networking.

Operational Time Schedules, 1972, 1976--Over Market Size

Table 8 presents the mean scores and range of values for each operation variable and each market group for 1972. Table 9 presents the means and range scores for each operation variable and each group for the 1976 data. Table 10 presents the per cent of change scores for the operations' variables, and for each market-size group. Examination of the 1972 data presents few surprises, unless the high degree of similarity among the market groups is a surprise. The 1976 data, however, give indication of a "major market response" to the optimal conditions of broadcast service times. The major market respondents consistently show higher weeks, days, and hours of broadcast service and, perhaps more importantly, show a substantial reduction (from 1972) in the range of their responses to these questions. The reduced range suggests a greater unanimity among these respondents than among the respondents from the other two groups.

While the major market stations tend to coalesce on the issues of a 52 week, 7 day, 16 hour service, they do not show any greater agreement on the make-up of that service, since the range values for hours of local production, film/tape hours, and interconnect time are equivalent to the other market groups.

The major differences in programming make-up among the three groups appear to be in hours of local production and regional interconnect time. Medium markets report and project a greater number of local production hours than major or small market stations. Small market stations report and

TABLE 8

MARKET SIZE		MAJOR		MEDIUM		SMALL	
FULL SCHEDULE OPERATION TIMES: 1972							
(1) NUMBER OF WEEKS PER YEAR		MEAN:	61.33	41.09	39.06		
RANGE:		20.00	22.00	1	42.50		
(2) NUMBER OF DAYS PER WEEK		MEAN:	6.36	6.36	6.14		
RANGE:		2.00	2.00	1	2.50		
(3) NUMBER OF BROADCAST HOURS PER DAY		MEAN:	12.93	13.42	12.12		
RANGE:		8.00	11.70	1	13.50		
(4) HOURS OF LOCAL PRODUCTION		MEAN:	2.83	3.59	1.49		
RANGE:		0.04	8.50	1	7.55		
(5) TOTAL TAPE OR FILM HOURS		MEAN:	7.05	5.78	5.29		
RANGE:		13.55	11.37	1	13.65		
(6) HOURS LOCAL PRODUCTION REPEATS		MEAN:	0.00	0.00	0.00		
(7) HOURS INTERCONNECT DELAY		MEAN:	0.00	0.00	0.00		
(8) HOURS FROM SYNDICATION		MEAN:	0.00	0.00	0.00		
RANGE:		0.00	0.00	0.00			
(9) TOTAL INTERCONNECT HOURS		MEAN:	5.87	5.12	6.89		
RANGE:		11.00	9.64	11.50			
(10) REGIONAL INTERCONNECT HOURS		MEAN:	1.48	0.58	1.31		
RANGE:		10.50	5.44	6.75			
(11) NATIONAL INTERCONNECT HOURS		MEAN:	4.19	4.18	4.29		
RANGE:		2.99	6.65	7.30			
(12) OTHER INTERCONNECT HOURS		MEAN:	0.20	0.36	0.98		
RANGE:		1.85	6.84	7.10			

TABLE 9

MARKET SIZE		MAJOR		MEDIUM		SMALL	
1	FULL SCHEDULE OPERATION TIMES: 1976	(1)	NUMBER OF WEEKS PER YEAR	MEAN:	50.62	47.91	46.58
				RANGE:	12.00	22.00	20.00
		(2)	NUMBER OF DAYS PER WEEK	MEAN:	7.00	6.86	6.96
				RANGE:	0.0	2.00	1.00
		(3)	NUMBER OF BROADCAST HOURS PER DAY	MEAN:	16.50	16.02	15.28
				RANGE:	5.50	10.00	10.00
		(4)	HOURS OF LOCAL PRODUCTION	MEAN:	4.46	5.23	2.92
				RANGE:	8.80	10.50	7.00
		(5)	TOTAL TAPE OR FILM HOURS	MEAN:	6.77	7.52	7.28
				RANGE:	16.50	11.00	15.20
		(6)	HOURS LOCAL PRODUCTION REPEATS	MEAN:	1.93	2.25	1.41
				RANGE:	6.30	5.50	5.92
		(7)	HOURS INTERCONNECT DELAY	MEAN:	1.67	2.75	2.71
				RANGE:	5.55	5.50	12.48
		(8)	HOURS PROM SYNDICATION	MEAN:	1.75	2.59	3.61
				RANGE:	9.25	4.70	6.44
		(9)	TOTAL INTERCONNECT HOURS	MEAN:	7.46	5.97	7.63
				RANGE:	12.00	9.50	13.50
		(10)	REGIONAL INTERCONNECT HOURS	MEAN:	1.66	0.99	1.85
				RANGE:	10.50	5.00	7.20
		(11)	NATIONAL INTERCONNECT HOURS	MEAN:	4.25	4.43	4.18
				RANGE:	11.05	4.70	7.94
		(12)	OTHER INTERCONNECT HOURS	MEAN:	0.97	0.66	1.28
				RANGE:	4.75	6.00	5.00

TABLE 10

MARKET SIZE		MAJOR		MEDIUM		SMALL	
FULL SCHEDULE OPERATION TIMES: 1976/1972							
(1)	NUMBER OF WEEKS PER YEAR	MEAN:	26.25	20.86	33.29		
		RANGE:	62.50	67.74	47.37		
(2)	NUMBER OF DAYS PER WEEK	MEAN:	11.82	8.41	14.54		
		RANGE:	40.00	40.00	40.00		
(3)	NUMBER OF BROADCAST HOURS PER DAY	MEAN:	31.55	20.93	44.96		
		RANGE:	87.50	100.00	433.33		
(4)	HOURS OF LOCAL PRODUCTION	MEAN:	179.93	106.60	232.52		
		RANGE:	1072.65	495.36	1120.00		
(5)	TOTAL TAPE OR FILM HOURS	MEAN:	97.44	63.77	133.25		
		RANGE:	864.94	320.00	949.63		
(6)	HOURS LOCAL PRODUCTION REPEATS	MEAN:	100.00	100.00	100.00		
		RANGE:	100.00	100.00	100.00		
(7)	HOURS INTERCONNECT DELAY	MEAN:	100.00	100.00	100.00		
		RANGE:	100.00	100.00	100.00		
(8)	HOURS FROM SYNDICATION	MEAN:	100.00	100.00	100.00		
		RANGE:	100.00	100.00	100.00		
(9)	TOTAL INTERCONNECT HOURS	MEAN:	53.46	24.45	35.26		
		RANGE:	122.77	94.63	226.11		
(10)	REGIONAL INTERCONNECT HOURS	MEAN:	359.55	301.65	129.28		
		RANGE:	900.00	1272.38	621.78		
(11)	NATIONAL INTERCONNECT HOURS	MEAN:	29.96	5.20	7.30		
		RANGE:	119.70	88.66	176.90		
(12)	OTHER INTERCONNECT HOURS	MEAN:	90.95	-12.31	43.73		
		RANGE:	284.76	122.31	304.82		

project the fewest local production hours. Small market stations report and project more hours of regional interconnect time than either of the other groups, although major market stations also report and project high values in this category. Medium market stations report less than one hour of current regional interconnect time, and see this time increasing to just over one and one-half hours in 1976.

Examination of the per cent of change scores brings to light the consistent projection of the greatest positive change occurring in the small markets with the single exception occurring in interconnect times. The areas of emphasis are reasonably the same among the three groups, with hours of local production and regional interconnect time being advanced for the greatest change.

Operational Time Schedules 1972, 1976--Over Total Operational Budget

Table 11 displays the mean scores and range values for the operational variables for each of the budget groups for 1972. Table 12 presents the mean scores and range values for each variable and each group for 1976. Table 13 provides the per cent of change scores, and range of those scores for each operational variable and each budget group. Inspection of these tables reveals what appears to be a definitive relationship between operational budgets, hours of local production, and dependence on national networking services.

Operational budget values do not show any consistent linear relation to the scope of full-service operations in terms of weeks per year, days per week, and hours per day. Low-budgeted stations do report and project the least amount of full-service operation, but high-budgeted stations do not report the greatest amount of full service. There does, however, appear to be a consistent linear relation between hours of local production, currently reported and projected for the future, and operational budget values. Stations

TABLE 11

TOTAL OPERATIONAL BUDGET!					
! FULL SCHEDULE OPERATION TIMES: 1972					
! (1) NUMBER OF WEEKS PER YEAR					
! (1) NUMBER OF WEEKS PER YEAR	MEAN:	41.55	LOW	MIDDLE	HIGH
	RANGE:	20.00	39.67	39.23	42.31
! (2) NUMBER OF DAYS PER WEEK	MEAN:	6.12	6.45	6.62	6.08
	RANGE:	2.50	1.00	1.00	2.00
! (3) NUMBER OF BROADCAST HOURS PER DAY	MEAN:	11.19	13.45	14.42	13.81
	RANGE:	10.00	8.50	0.00	9.50
! (4) HOURS OF LOCAL PRODUCTION	MEAN:	1.13	2.70	2.83	3.98
	RANGE:	3.80	6.73	5.85	8.50
! (5) TOTAL TAPE OR FILM HOURS	MEAN:	5.44	5.30	5.49	7.46
	RANGE:	13.90	12.09	9.37	11.00
! (6) HOURS LOCAL PRODUCTION REPEATS	MEAN:	*****	*****	*****	*****
	RANGE:	*****	*****	*****	*****
! (7) HOURS INTERCONNECT DELAY	MEAN:	*****	*****	*****	*****
	RANGE:	*****	*****	*****	*****
! (8) HOURS PROH SYNDICATION	MEAN:	*****	*****	*****	*****
	RANGE:	*****	*****	*****	*****
! (9) TOTAL INTERCONNECT HOURS	MEAN:	7.02	5.41	6.37	4.63
	RANGE:	11.75	6.50	9.44	6.30
! (10) REGIONAL INTERCONNECT HOURS	MEAN:	1.58	0.18	1.66	0.40
	RANGE:	10.50	0.42	6.00	3.41
! (11) NATIONAL INTERCONNECT HOURS	MEAN:	4.19	4.64	4.12	4.04
	RANGE:	7.30	4.10	6.65	4.81
! (12) OTHER INTERCONNECT HOURS	MEAN:	0.85	0.59	0.58	0.19
	RANGE:	7.10	2.97	6.34	2.08

TABLE 12

		LOW	MIDDLE	HIGH
TOTAL OPERATIONAL BUDGET				
(1) FULL SCHEDULE OPERATION TIMES: 1976				
(1) NUMBER OF WEEKS PER YEAR	MEAN:	46.47	47.50	48.29
	RANGE:	17.00	22.00	20.00
(2) NUMBER OF DAYS PER WEEK	MEAN:	6.89	7.00	7.00
	RANGE:	1.00	0.0	0.0
(3) NUMBER OF BROADCAST HOURS PER DAY	MEAN:	14.89	16.05	16.57
	RANGE:	10.00	5.00	5.00
(4) HOURS OF LOCAL PRODUCTION	MEAN:	3.34	4.33	4.37
	RANGE:	9.00	11.00	6.30
(5) TOTAL TAPE OR FILM HOURS	MEAN:	7.36	6.12	5.82
	RANGE:	15.20	11.15	11.00
(6) HOURS LOCAL PRODUCTION REPEATS	MEAN:	1.11	1.44	1.11
	RANGE:	3.00	2.40	1.90
(7) HOURS INTERCONNECT DELAY	MEAN:	3.17	2.34	1.85
	RANGE:	12.48	5.25	5.00
(8) HOURS FROM SYNDICATION	MEAN:	3.15	3.16	1.76
	RANGE:	4.84	5.55	3.90
(9) TOTAL INTERCONNECT HOURS	MEAN:	8.03	6.82	7.57
	RANGE:	11.00	5.00	9.00
(10) REGIONAL INTERCONNECT HOURS	MEAN:	2.27	1.12	1.91
	RANGE:	10.50	4.00	5.85
(11) NATIONAL INTERCONNECT HOURS	MEAN:	4.22	4.56	5.08
	RANGE:	7.02	5.20	8.25
(12) OTHER INTERCONNECT HOURS	MEAN:	1.03	1.13	0.88
	RANGE:	4.80	3.78	6.00

TABLE 13

TOTAL OPERATIONAL BUDGET			
FULL SCHEDULE OPERATION TIMES: 1976/1972			
(1) NUMBER OF WEEKS PER YEAR	LOW	MIDDLE	HIGH
(1) MEAN:	14.79	22.72	26.02
(1) RANGE:	44.44	52.94	67.74
(2) NUMBER OF DAYS PER WEEK	LOW	MIDDLE	HIGH
(2) MEAN:	13.69	9.09	6.41
(2) RANGE:	40.00	16.67	16.67
(3) NUMBER OF BROADCAST HOURS PER DAY	LOW	MIDDLE	HIGH
(3) MEAN:	37.28	23.13	17.16
(3) RANGE:	200.00	87.50	40.74
(4) HOURS OF LOCAL PRODUCTION	LOW	MIDDLE	HIGH
(4) MEAN:	341.21	135.68	122.46
(4) RANGE:	1083.33	300.00	495.36
(5) TOTAL TAPE OR FILM HOURS	LOW	MIDDLE	HIGH
(5) MEAN:	168.99	40.75	36.58
(5) RANGE:	851.85	123.99	301.25
(6) HOURS LOCAL PRODUCTION REPEATS	LOW	MIDDLE	HIGH
(6) MEAN:	130.19	223.53	133.96
(6) RANGE:	440.00	200.00	160.71
(7) HOURS INTERCONNECT DELAY	LOW	MIDDLE	HIGH
(7) MEAN:	17.27	44.33	34.79
(7) RANGE:	130.19	223.53	133.96
(8) HOURS FROM SYNDICATION	LOW	MIDDLE	HIGH
(8) MEAN:	107.49	1119.86	986.67
(8) RANGE:	69.33	103.53	912.38
(9) TOTAL INTERCONNECT HOURS	LOW	MIDDLE	HIGH
(9) MEAN:	1.79	2.54	18.14
(9) RANGE:	3.79	103.53	144.48
(10) REGIONAL INTERCONNECT HOURS	LOW	MIDDLE	HIGH
(10) MEAN:	-13.48	453.73	150.56
(10) RANGE:	107.49	1119.86	986.67
(11) NATIONAL INTERCONNECT HOURS	LOW	MIDDLE	HIGH
(11) MEAN:	69.33	103.53	144.48
(11) RANGE:	69.33	103.53	144.48
(12) OTHER INTERCONNECT HOURS	LOW	MIDDLE	HIGH
(12) MEAN:	38.67	-34.45	110.51
(12) RANGE:	304.82	34.45	245.64
			0.0

with higher budgets show consistently higher local production times.

Stations in the highest budget category display programming characteristics which suggest a different class of operation from all other stations. These stations report and project a greater local and regional programming approach with less emphasis on national network services than all other stations. This result, in turn, suggests that there is a critical funding point where a localized programming service becomes viable. Looking at the projected 1976 figures, and comparing the relationship between the sum of local production, local production repeats, and syndicated programming with the sum of all network supplied programming, the split for high-budgeted stations is 55/45. For the next budget category down, the split is reversed at 43/57. In fact, the average for the three lower categories is exactly reversed at 45/55. The consequence of a critical funding point is that incremental increases in funding will not result in incremental increases in localized programming. For some stations, the funding increment needed to produce any measurable change in localized programming will be moderate; but for others, massive.

The per cent of change scores illustrate the problem above. In 1976, high-budgeted stations project 42 per cent more local production time than low-budgeted stations. Even to arrive at this level of equivalence, low-budgeted stations must increment their local programming time by 341 per cent, while high-budgeted stations project an increment of only 59 per cent.

SECTION TWO: LOCAL PROGRAM NEEDS, 1976

In this section, respondents were asked to consider the needs of their audiences in regard to seven categories of programming: public affairs, non-classroom instructional, cultural, newscasts, classroom instructional, children's, and in-service. Space for other program needs was also provided.

Stations indicated the number of hours per week, and sample programs for each category. These data were analyzed over all respondents as to hours and program examples, and the hourly data were further broken down by the control variables of ownership and market size. The results from these analyses follow in order.

Local Program Needs, 1976--Over All Respondents

Table 14 provides each program category, the mean number of hours per week projected for 1976, examples of programs within each type and the number of mentions each example received from the total respondent group. As can be seen, classroom instruction is far and away the leader in terms of time commitments. That category is followed at some distance by the categories of public affairs, non-classroom instructional, cultural, and children's programming. Lowest in time demands are professional in-service, newscast, and other. While the time estimates are liberal--demanding some five hours of local programming per day in a six day week--the relative values can reasonably be taken as expressive of the role public television sees itself playing in the local market. That role varies substantially according to the ownership control variable, and is affected by the market size. The cross-classifications supporting this statement are presented below.

Local Programs Needs, 1976--Over Ownership

Table 15 presents each program category, the mean number of hours per week projected for 1976 for each ownership group, and the range of values within each category for each group. In five of the program categories, the hours projected are approximately the same among the four groups. There are, however, some differences among the groups in the non-classroom instructional category, substantial differences in the children's programming, and very large differences in the classroom instructional category. Non-classroom

TABLE 14

<u>Category and Program Examples</u>	<u>Frequency Of Selection</u>	<u>Hours Per Week</u>
<u>Public Affairs</u>		4.21
City or County Governmental Meetings	28	
Local Community Affairs	27	
General Governmental Coverage	27	
Documentary	19	
Public Forum	18	
School Board Meetings	13	
Minority Programs	7	
Special Events	6	
Other	19	
<u>Instructional (Non-Classroom)</u>		3.48
How-To-Do-It	34	
Courses	22	
Personal Improvement	18	
Home and Family	17	
Adult Basic Education	15	
Vocational Training	10	
Programs Aged and Handicapped	8	
High School Equivalency	6	
Other	8	
<u>Cultural</u>		2.98
Symphony and Music Concerts	53	
Drama	49	
Art Programs	22	
Dance	11	
Museums and Zoos	8	
Minority Group Cultural Program	7	
Other	10	
<u>Newscasts</u>		1.39
(Local News Only)		
<u>Classroom Instructional</u>		8.71
Science	26	
History and Social Studies	20	
Art and Music	15	
Enrichment	11	
Math	10	
Language Arts	6	
Psychology	5	
Vocational	4	
Special Ed	2	
As Contracted	17	
Other	8	

TABLE 14 - continued

<u>Category and Program Examples</u>	<u>Frequency Of Selection</u>	<u>Hours Per Weeks</u>
<u>Children's Programs</u>		2.74
Art, Music, and Theatre	22	
Syndicated Programs	15	
Entertainment	13	
Documentaries for Children	13	
Instructional/Informational	8	
Other	3	
<u>Professional and In-Service</u>		1.76
Medical, Nursing, Paramedical	44	
Management Training	21	
Teacher Training	20	
Professional Training	13	
Vocational	8	
Home and Consumer	5	
Other	12	
<u>Other</u>		1.35
Programs for Specialized Groups	15	
Sports	13	
Specials on Various Topics	11	
Public Affairs/Public Access	9	
Vocational/Hobby	9	
Other	6	

Table 14--Program categories, mean number of hours per week for each category, program examples for each category, and the frequency of selection for each program example.

TABLE 15

OWNERSHIP	UNIVERSITY	COMMUNITY	SCHOOL	STATE	LICEN
LOCAL PRODUCTION PROGRAM NEEDS: 1976					
(1) HOURS: PUBLIC AFFAIRS	MEAN: 4.44	5.01	3.23	1	3.50
	RANGE: 14.00	12.00	9.00	1	11.50
(2) HOURS: INSTRUCTIONAL	MEAN: 2.01	3.50	3.23	1	5.32
	RANGE: 5.50	10.00	11.50	1	35.50
(3) HOURS: CULTURAL	MEAN: 2.50	3.31	2.00	1	3.82
	RANGE: 9.50	10.00	9.75	1	14.50
(4) HOURS: NEWSCASTS	MEAN: 1.55	1.31	1.45	1	1.27
	RANGE: 6.00	7.00	6.00	1	7.00
(5) HOURS: CLASSROOM INSTRUCTION	MEAN: 2.47	7.40	13.73	1	13.86
	RANGE: 10.00	40.00	35.50	1	43.00
(6) HOURS: CHILDREN'S	MEAN: 1.28	2.31	3.86	1	4.18
	RANGE: 6.00	12.00	15.00	1	24.00
(7) HOURS: IN SERVICE	MEAN: 1.44	1.71	2.60	1	2.43
	RANGE: 4.00	6.00	12.38	1	9.50
(8) HOURS: OTHER	MEAN: 0.81	1.50	1.27	1	1.80
	RANGE: 2.00	6.00	5.00	1	8.00

instructional programming shows State licensees projecting considerably more hours than the other three groups, and University stations projecting considerably less. University stations also project fewer hours of children's programming, and substantially fewer hours of classroom instructional time.

The different roles perceived by the stations operating under the different ownerships can best be exemplified by the relative ranking of the eight program categories. Table 16 presents the ranked categories for each of the ownership groups.

TABLE 16

Rank of Program Category

<u>University</u>	<u>Community</u>	<u>School</u>	<u>State</u>
Public Affairs	Classroom Instr.	Classroom Instr.	Classroom Instr.
Cultural	Public Affairs	Children's Prog.	Non-Class Instr.
Classroom Instr.	Non-Class Instr.	Non-Class Instr.	Children's Prog.
Non-Class Instr.	Cultural	Public Affairs	Cultural
Newscasts	Children's Prog.	In-Service	Public Affairs
In-Service	In-Service	Cultural	In-Service
Children's Prog.	Other	Newscasts	Other
Other	Newscasts	Other	Newscasts

Table 16--Relative rank, in terms of time, of each program category for each ownership group.

As can be seen in the table, University stations have public affairs and cultural programming as their top two categories; Community stations rank classroom instructional and public affairs as the top two; School Systems

have classroom instructional and non-classroom instructional as the first two categories. University stations rank children's programming and "other" as the last categories. Community rank last "other" and newscast, as do the School and State stations.

The total number of hours projected for 1976 varies notably for the four ownership groups. University stations project 16.5 hours of local programming within these categories per week. Community stations project almost ten hours more at 26 hours. School System stations with the heavy classroom instructional load reach 31.4 hours per week. State licensees with heavy loads in both classroom and non-classroom instructional categories project 36.2 hours of local programming per week.

Local Program Needs, 1976--Over Market Size

Table 17 displays the mean scores and the range for each program category and each of the three market size groups. Investigation of that table discloses the definitive difference of the major market stations. These stations report a larger number of hours in every category except newscasts. The total number of hours (45) for major market stations is 80 per cent higher than the total (25 hours) for medium market stations, and 129 per cent larger than the small market station total (20 hours).

Local Program Needs, 1976--Over Operational Budget

Table 18 exhibits the mean hours per week and range of values for each program category and each budget group. The most notable aspect of this table is the escarpment effect of the high budget category. Budget categories prior to that value report programming levels which are reasonably the same across the eight categories. Time values for almost all of the categories rise steeply for the high budget group. In terms of totals, the high budget

TABLE 17

MARKET SIZE		MAJOR	MEDIUM	SMALL
LOCAL PRODUCTION PROGRAM NEEDS: 1976				
(1) HOURS: PUBLIC AFFAIRS		MEAN: 12.25	3.63	3.81
(2) HOURS: INSTRUCTIONAL		MEAN: 35.50	2.87	2.45
(3) HOURS: CULTURAL		MEAN: 14.00	2.39	2.35
(4) HOURS: NEWSCASTS		MEAN: 7.00	10.00	7.50
(5) HOURS: CLASSROOM INSTRUCTION		MEAN: 45.00	1.07	1.70
(6) HOURS: CHILDREN'S		MEAN: 24.00	7.00	6.00
(7) HOURS: IN SERVICE		MEAN: 12.50	10.33	4.92
(8) HOURS: OTHER		MEAN: 6.00	36.00	40.00

TABLE 18

		LOW	LOW MIDDLE	HIGH
LOCAL PRODUCTION PROGRAM NEEDS: 1976				
(1) HOURS: PUBLIC AFFAIRS		MEAN: 3.87	4.75	4.29
		RANGE: 11.00	8.00	14.00
(2) HOURS: INSTRUCTIONAL		MEAN: 2.91	2.25	2.75
		RANGE: 9.50	6.00	8.00
(3) HOURS: CULTURAL		MEAN: 2.67	2.44	2.75
		RANGE: 7.50	10.00	9.00
(4) HOURS: NEWSCASTS		MEAN: 1.66	0.71	1.75
		RANGE: 6.00	3.50	7.00
(5) HOURS: CLASSROOM INSTRUCTION		MEAN: 5.85	5.58	5.21
		RANGE: 36.00	25.00	35.00
(6) HOURS: CHILDREN'S		MEAN: 2.25	1.96	1.82
		RANGE: 12.00	5.00	6.00
(7) HOURS: IN SERVICE		MEAN: 1.47	2.29	1.25
		RANGE: 6.00	5.00	3.00
(8) HOURS: OTHER		MEAN: 0.85	1.46	1.32
		RANGE: 5.00	5.00	6.00

group reports approximately 45 hours of projected programming per week. The average of the three other budget groups is just over 20 hours. Differences of significant note between the high group and the other three occur (in order of importance) with the classroom instructional, children's, non-classroom instructional, and in-service categories.

SECTION THREE: LOCAL PROGRAM COSTS: FIXED, VARIABLE, AND TOTAL

In this section of the questionnaire, respondents were asked to calculate the fixed and variable costs for four exemplary programs. Those programs were a current events' remote coverage, a 32-program school course, a social issues' documentary, and a public access service. Respondents were instructed to calculate the cost on the basis of the programming style their market would require. Analysis of these data are presented across all respondents and broken down by the control variables of ownership, market size, operational budgets, and facilities. These analyses follow in order.

Local Program Costs: Fixed, Variable, and Total--Over All Respondents

Table 19 displays the mean scores and range of values for each of the program types and each of the cost categories. The striking aspect of the data in Table 19 is that the values are so low. When one considers that costs for one minute of commercial production may range upwards to \$50,000, the fact that 32 in-school programs can be produced for little over \$1,400 per half hour is, in many ways, an incredible bargain. The most expensive program type is the social issues' documentary projected at \$12,000. This cost perhaps reflects the specialized personnel costs and heavy investments in remote equipment usually associated with documentary coverage. Whatever the sources, the high cost (relative to other program types) does not recommend documentaries as a common occurrence on the local level.

TABLE 19

TOTAL RESPONDENTS		FIXED		VARIABLE		TOTAL							
LOCAL PROGRAM COSTS:													
(1) CURRENT EVENTS REMOTE COVERAGE													
		MEAN:	1743.14		1990.51	3683.56							
		RANGE:	25000.00		52000.00	77000.00							
(2) 32 PROGRAM SCHOOL COURSE													
		MEAN:	24464.13		24464.72	59251.46							
		RANGE:	291560.94		172505.75	640000.00							
(3) SOCIAL ISSUE DOCUMENTARY													
		MEAN:	7609.04		4882.96	12492.00							
		RANGE:	182225.50		31060.00	212929.25							
(4) PUBLIC ACCESS SERVICE													
		MEAN:	419.27		606.46	1025.73							
		RANGE:	4555.64		12500.00	13500.00							

Local Program Costs: Fixed, Variable, and Total--Over Ownership

Table 20 presents the mean fixed variable and total costs and range of values for University, Community, School System, and State licensees. Inspection of Table 20 shows some startling differences in the fixed costs' picture among the ownership groups. University stations report fixed costs considerably lower than all other groups. In fact, their values average 2.5 times lower than the other groups. The probable cause of this difference is the difficulty in separating out fixed costs attributable to the licensee operation as separate from the larger institution. It is not unusual for a University station to be sharing building, maintenance, security, and even administrative costs with other functions of the University. The fact that the costs are substantially lower than others in the field strongly suggests that their true value is underestimated.

The high costs of the State licensees are probably attributable to the larger costs of State distribution systems and their administration, in that each station very likely must pay its share of the larger corporate costs.

Two program types have notably wide ranges in the values reported for their fixed costs. These are the 32-program school course and the social issues' documentary. These wide ranges for these program types suggest that a) the program costs are difficult to estimate, b) conditions of the market are such that the quality requirements of such programs are highly variable, or c) some combination of the two.

Variable costs approximate the pattern of the fixed costs. University stations generally show much lower variable costs than other licensees; State owners show much higher costs than the other licensees. The lower University costs may reflect the general availability of a large pool of students who provide a low-cost work force. The higher State costs suggest

TABLE 20

OWNERSHIP		UNIVERSITY COMMUNITY SCHOOL DIST STATE LICENSE							
LOCAL PROGRAM COSTS: FIXED									
(1) CURRENT EVENTS REMOTE COVERAGE									
	1 MEAN: 583.3	1 124.4-95 1 2892.70 1 2912.75							
	1 RANGE: 4264.00	1 7781.00 1 25000.00 1 22778.20							
	1 MEAN: 12547.59	1 22864.70 1 18604.50 1 45086.35							
	1 RANGE: 88832.00	1 249019.00 1 88190.00 1 291560.34							
(2) 32 PROGRAM SCHOOL COURSE									
(3) SOCIAL ISSUE DOCUMENTARY									
	1 MEAN: 2475.99	1 8743.84 1 1508.36 1 16566.58							
	1 RANGE: 16500.00	1 15563.60 1 5000.00 1 182225.50							
(4) PUBLIC ACCESS SERVICE									
LOCAL PROGRAM COSTS: VARIABLE									
(1) CURRENT EVENTS REMOTE COVERAGE									
	1 MEAN: 530.81	1 1163.69 1 4986.89 1 2322.80							
	1 RANGE: 1254.50	1 500.00 1 52000.00 1 19032.00							
(2) 32 PROGRAM SCHOOL COURSE									
(3) SOCIAL ISSUE DOCUMENTARY									
	1 MEAN: 19437.56	1 23995.87 1 11219.45 1 41320.41							
	1 RANGE: 115662.00	1 119636.00 1 51200.00 1 172505.75							
(4) PUBLIC ACCESS SERVICE									
LOCAL PROGRAM COSTS: TOTAL									
(1) CURRENT EVENTS REMOTE COVERAGE									
	1 MEAN: 1114.12	1 2408.68 1 7879.58 1 5235.55							
	1 RANGE: 5064.00	1 11392.00 1 7000.00 1 41810.20							
(2) 32 PROGRAM SCHOOL COURSE									
(3) SOCIAL ISSUE DOCUMENTARY									
	1 MEAN: 31985.16	1 46860.57 1 29823.95 1 132121.00							
	1 RANGE: 144132.00	1 36865.00 1 88190.00 1 646000.00							
(4) PUBLIC ACCESS SERVICE									

the greater production capacity of the larger State systems. This larger capacity, while it has more functional ability, also costs more.

The total costs are the sum of the fixed and variable costs⁷. The table is provided primarily for the reader's convenience. The table does show, nevertheless, the remarkable diversity of the estimates from the different ownership groups. It is undoubtedly true that the estimates vary, relative to the experience each ownership group has had with each program type. It is also, no doubt, true that the estimates vary according to the perceptions the ownership groups have of their target audience and broadcasting role.

Local Program Costs: Fixed, Variable, and Total--Over Market Size

Table 21 presents the fixed variable and total cost mean scores and range of values for the three market groups.

Market size appears to have its primary effect on the category of the small markets. Stations in these markets consistently report the lowest costs for fixed and variable categories over all program types. Major and medium sized markets tend to trade in having the highest costs. One consistent pattern does occur across all three market categories with the social issue program type. In this category, the magnitude of both fixed and variable costs is directly related to market size.

Local Program Costs: Fixed, Variable, and Total--Over Total Operational Budget

Table 22 presents the mean scores and range for fixed variable and total costs over the operational budget categories.

The total estimates for the four program categories are almost perfectly in direct relationship with total operational values. The only fly in

⁷An exception occurs under State stations, where one respondent reported totals only. The effect of this difference is most noticeable in the School course category, where the respondents' estimate was at the upper end of the range.

TABLE 21

MARKET SIZE		MAJOR		MEDIUM		SMALL	
LOCAL PROGRAM COSTS: FIXED							
(1) CURRENT EVENTS BROADCAST COVERAGE		MEAN: 1 RANGE: 1	1481.00 7761.00	3286.67 25000.00	510.56 3500.00		
(2) 32 PROGRAM SCHOOL COURSE		MEAN: 1 RANGE: 1	39274.74 249019.00	32571.02 291560.94	9887.44 50000.00		
(3) SOCIAL ISSUE DOCUMENTARY		MEAN: 1 RANGE: 1	13721.36 155636.00	11319.53 182225.50	1270.53 10000.00		
(4) PUBLIC ACCESS SERVICE		MEAN: 1 RANGE: 1	528.84 1945.00	624.32 4555.64	183.29 966.00		
LOCAL PROGRAM COSTS: VARIABLE							
(1) CURRENT EVENTS BROADCAST COVERAGE		MEAN: 1 RANGE: 1	1063.04 3611.00	4165.26 52000.00	410.96 1254.50		
(2) 32 PROGRAM SCHOOL COURSE		MEAN: 1 RANGE: 1	27904.99 119636.00	31691.73 172505.75	16351.96 115662.00		
(3) SOCIAL ISSUE DOCUMENTARY		MEAN: 1 RANGE: 1	11336.55 31060.00	4617.90 30703.80	1890.63 8080.00		
(4) PUBLIC ACCESS SERVICE		MEAN: 1 RANGE: 1	382.12 1000.00	1151.53 1250.00	256.48 2000.00		
LOCAL PROGRAM COSTS: TOTAL							
(1) CURRENT EVENTS BROADCAST COVERAGE		MEAN: 1 RANGE: 1	2544.08 11052.00	7449.98 77000.00	921.52 3500.00		
(2) 32 PROGRAM SCHOOL COURSE		MEAN: 1 RANGE: 1	116409.56 60000.00	64262.74 46066.75	26239.40 125638.00		
(3) SOCIAL ISSUE DOCUMENTARY		MEAN: 1 RANGE: 1	25057.92 186196.00	15937.43 212929.25	3161.17 10012.00		
(4) PUBLIC ACCESS SERVICE		MEAN: 1 RANGE: 1	870.57 2595.00	175.86 13500.00	439.73 2000.00		

TABLE 22

		LOW	LOW	MIDDLE	HIGH	HIGH
TOTAL OPERATIONAL BUDGET						
LOCAL PROGRAM COSTS: FIXED						
(1) CURRENT EVENTS REMOTE COVERAGE	MEAN: 1 RANGE: 1	\$51.95 3000.00	564.72 1215.00	1126.07 6000.00	5099.62 25000.00	
(2) 32 PROGRAM SCHOOL COURSE	MEAN: 1 RANGE: 1	9751.62 59055.00	12943.29 35000.00	7965.61 46000.00	70327.19 291560.94	
(3) SOCIAL ISSUE DOCUMENTARY	MEAN: 1 RANGE: 1	934.25 7644.00	2284.33 10000.00	2119.76 16500.00	26399.15 182225.50	
(4) PUBLIC ACCESS SERVICE	MEAN: 1 RANGE: 1	215.25 2120.00	185.43 400.00	339.00 966.00	981.23 4555.64	
LOCAL PROGRAM COSTS: VARIABLE						
(1) CURRENT EVENTS REMOTE COVERAGE	MEAN: 1 RANGE: 1	\$30.40 1700.00	663.48 2500.00	1181.74 5000.00	5679.42 52000.00	
(2) 32 PROGRAM SCHOOL COURSE	MEAN: 1 RANGE: 1	13152.95 11562.00	11464.50 5600.00	25191.11 96000.00	50900.36 172505.75	
(3) SOCIAL ISSUE DOCUMENTARY	MEAN: 1 RANGE: 1	1902.97 9000.00	3296.92 13640.00	5171.29 15000.00	10181.53 31060.00	
(4) PUBLIC ACCESS SERVICE	MEAN: 1 RANGE: 1	422.62 4654.00	90.75 400.00	342.52 1000.00	1550.91 12500.00	
LOCAL PROGRAM COSTS: TOTAL						
(1) CURRENT EVENTS REMOTE COVERAGE	MEAN: 1 RANGE: 1	92.35 3700.00	1228.21 3715.00	2307.82 11000.00	10779.05 77000.00	
(2) 32 PROGRAM SCHOOL COURSE	MEAN: 1 RANGE: 1	22904.57 125638.00	24407.79 80300.00	33156.72 96362.00	163894.19 640000.00	
(3) SOCIAL ISSUE DOCUMENTARY	MEAN: 1 RANGE: 1	2837.22 5094.00	5581.25 643.00	7291.05 1511.00	36580.69 13500.00	
(4) PUBLIC ACCESS SERVICE	MEAN: 1 RANGE: 1	637.87 5094.00	276.18 643.00	681.52 1511.00	2533.14 13500.00	

the researcher's delight is in the public-access, low-middle-budget cell, where total costs are lower than the preceding cell. Fixed and variable costs show this same pattern, but less perfectly; the high-middle-budget category is not always clearly distinguished from the low-middle group.

Part of the relationship between total operational budget and the various costs of the programs is determined by the nature of the control variable. That is, higher operational budgets occur, in part, because of a greater number of operational costs (more salaries, more departments to support, etc.) which will translate most directly into higher fixed program costs. The relationship of these operational costs with variable program costs, however, is not as clear. Presumably, a camera operator should cost approximately the same, regardless of the station. Production capacity must clearly play a role in the relationship. Production capacity, as referred to here, means the supportive elements used in program development. It refers to the artwork department, the scene shop, the photographic work, and so on, which are used to flesh out the studio--camera--talent skeleton. What appears to be demonstrated here is that, as production quality and capacity is increased, the costs of producing increase. The result is that studios with large production capacity can deliver less product for the same number of dollars. The increase of production capacity, then, without the concomitant increase in production dollars, will not lead to an increase of product. This problem of dollars for machinery without dollars for programs is neatly illustrated by the relationship between production costs and available facilities reported directly below.

Local Program Costs: Fixed, Variable, and Total--Over Available Facilities

The reader will recall that the facilities categories were based on the availability of live color, video tape recording in color, and remote production

capacity. Table 23 presents the mean scores and range of values for fixed, variable, and total costs over the three available facilities categories. The data in all three cost categories show a perfect relationship between increasing facility options and increasing production costs. A few ratios will exemplify the relationship. Total costs for a current events remote coverage by a full option station are ten times the cost estimated by stations with basic facilities. Total costs for basic stations are one-fourth of those estimated by full option stations for the 32-program school course and the public access service, and one-sixth of those costs for the social issues documentary.

Obviously, high-capacity stations can reduce some of their costs, particularly variable costs, by using less of their capacity. It would be inaccurate to say that, if funding of \$75,000 were available, basic stations could produce three 32-program school courses, and full-option stations would only have half the funding for one series. It would be equally inaccurate, however, to say that there would not be fundamental cost differences between the two classes of stations. Capacity and subsequent production costs are inextricably interrelated.

SECTION FOUR: LOCAL BROADCAST COSTS

At this point in the questionnaire, respondents were asked to provide current costs and to estimate costs for 1976 for a one-hour operation of the a) transmitter only; b) the transmitter plus interconnect cost; c) the transmitter plus tape playback cost; and d) the transmitter plus a film play. These data were analyzed over all respondents, and the control variables of ownership, market size, and operational service time. These analyses follow directly.

TABLE 23

FACILITIES					
LOCAL PROGRAM COSTS: FIXED					
(1) CURRENT EVENTS BROADCAST COVERAGE					
		MEAN:	622.07	980.17	4998.52
		RANGE:	3500.00	4264.00	25000.00
(2)	32 PROGRAM SCHOOL COURSE				
		MEAN:	10999.84	19188.58	57335.44
		RANGE:	88190.00	110000.00	291560.94
(3)	SOCIAL ISSUE DOCUMENTARY				
		MEAN:	1609.80	2222.32	27171.59
		RANGE:	16500.00	10000.00	182225.50
(4)	PUBLIC ACCESS SERVICE				
		MEAN:	262.49	324.21	855.39
		RANGE:	1800.00	2120.00	4555.64
LOCAL PROGRAM COSTS: VARIABLE					
(1) CURRENT EVENTS BROADCAST COVERAGE					
		MEAN:	433.28	827.31	6460.38
		RANGE:	1402.22	2500.00	52000.00
(2)	32 PROGRAM SCHOOL COURSE				
		MEAN:	13120.40	22290.80	489293.96
		RANGE:	96000.00	115662.00	172505.75
(3)	SOCIAL ISSUE DOCUMENTARY				
		MEAN:	2887.66	3971.26	9943.79
		RANGE:	15000.00	17000.00	31060.00
(4)	PUBLIC ACCESS SERVICE				
		MEAN:	280.58	390.36	1543.40
		RANGE:	2000.00	4634.00	12500.00
LOCAL PROGRAM COSTS: TOTAL					
(1) CURRENT EVENTS BROADCAST COVERAGE					
		MEAN:	1055.35	1807.48	11458.91
		RANGE:	3500.00	5064.00	77000.00
(2)	32 PROGRAM SCHOOL COURSE				
		MEAN:	24030.24	4479.35	15343.62
		RANGE:	96362.00	165000.00	640000.00
(3)	SOCIAL ISSUE DOCUMENTARY				
		MEAN:	4497.46	6193.58	37115.38
		RANGE:	16500.00	23000.00	213929.25
(4)	PUBLIC ACCESS SERVICE				
		MEAN:	543.07	714.57	2398.79
		RANGE:	2000.00	5034.00	13500.00

Local Broadcast Costs--Over All Respondents

Table 24 presents the mean scores and range of values for 1972 and 1976, and the per cent of change scores for the four categories of local broadcast costs. Respondents, evidently influenced by the inflationary spiral, estimate a six-to-nine per cent increase per year in the basic local broadcast costs.

The transmitter plus interconnect category represent the highest costs. This result is, in part, influenced by the unusual cost of local or regional interconnections.

Local Broadcast Costs--Over Ownership Groups

Table 25 presents the mean cost values and range of scores for the 1972 and 1976 broadcast costs over the ownership groups. Table 25 also exhibits the per cent of change scores for these costs and these groups. As with other cost figures, University stations report the lowest cost values. No ownership group consistently reports the highest values. All per cent of change scores are positive; the transmitter-only costs (having the lowest 1972 cost) show the higher per cent of change scores.

Local Broadcast Costs--Over Market Size

Table 26 displays the mean scores and range of values for the four broadcast costs and the three market categories for 1972, 1976, and the per cent of change scores for these variables and groups. With the exception of the small-market, transmitter-plus-interconnect-cost cell (whose deviation is the result of a single respondent), local broadcast costs are directly related to the size of the market. As market size increases, broadcast costs increase. Most likely, this relationship is the result of increased labor costs in the more urban markets. The differences are considerable. Major market costs are reported and projected as double those of the small markets.

TABLE 24

		1972		1976		1972/1976	
		MEAN:	RANGE:	MEAN:	RANGE:	MEAN:	RANGE:
TOTAL RESPONDENTS							
LOCAL BROADCAST COSTS, ONE HOUR:							
(1) TRANSMITTER ONLY		94.51	865.00	128.84	864.00	45.70	290.47
(2) XTR PLUS INTERCONNECT		191.88	2389.00	251.98	2745.00	28.73	157.29
(3) XTR PLUS TAPE PLAYBACK		154.38	944.50	189.94	938.00	27.05	141.21
(4) XTR PLUS FILE PLAY		141.64	932.00	172.71	927.00	27.48	138.18

TABLE 25

OWNERSHIP		UNIVERSITY		COMMUNITY		SCHOOL		DISTSTATE		LICENSE											
LOCAL BROADCAST COSTS, ONE HOUR: 1972																					
(1) TRANSMITTER ONLY																					
(2) INTRA PLUS INTERCONNECT		MEAN	61.94		97.39		128.21		99.25												
		RANGE	287.00		364.00		864.00		260.00												
(3) INTRA PLUS TAPE PLAYBACK		MEAN	75.08		165.07		529.01		143.67												
		RANGE	281.00		505.00		2380.00		439.00												
(4) INTRA PLUS FILM PLAY		MEAN	98.33		190.75		184.90		150.05												
		RANGE	296.00		508.31		941.00		562.50												
LOCAL BROADCAST COSTS, ONE HOUR: 1976																					
(1) TRANSMITTER ONLY																					
(2) INTRA PLUS INTERCONNECT		MEAN	76.79		144.16		138.51		155.39												
		RANGE	356.00		420.00		864.00		386.50												
(3) INTRA PLUS TAPE PLAYBACK		MEAN	140.64		228.64		644.50		199.13												
		RANGE	755.00		547.00		2740.00		505.00												
(4) INTRA PLUS FILM PLAY		MEAN	110.50		256.08		166.28		204.73												
		RANGE	361.00		543.00		935.00		645.00												
LOCAL BROADCAST COSTS, ONE HOUR: 1976/1972																					
(1) TRANSMITTER ONLY																					
(2) INTRA PLUS INTERCONNECT		MEAN	25.66		54.92		40.49		56.38												
		RANGE	66.67		188.00		246.66		238.62												
(3) INTRA PLUS TAPE PLAYBACK		MEAN	23.46		35.68		10.28		37.24												
		RANGE	66.67		114.61		93.33		63.16												
(4) INTRA PLUS FILM PLAY		MEAN	18.05		35.52		11.99		35.62												
		RANGE	69.09		104.85		86.36		52.56												

TABLE 35

UNIVERSITY		COMMUNITY		SCHOOL	DIST	STATE	LICEN
MEAN:	120.71		115.69		205.18		152.02
RANGE:	301.73		583.41		1587.33		763.29
MEAN:	86.97		264.02		75.62		297.78
RANGE:	308.69		685.29		168.65		2385.00
MEAN:	557.31		418.15		252.33		217.07
RANGE:	340.10		1363.71		754.49		1158.18
MEAN:	123.11		554.13		657.38		103.0
RANGE:	397.70		3931.73		3229.50		518.41
MEAN:	812.34		309.79		100.08		113.09
RANGE:	1812.68		2876.92		74.75		0.0
MEAN:	10930.15		2687.85		380.78		122.15
RANGE:	117526.29		29310.55		1771.74		516.67
MEAN:	253.87		301.61		3549.64		965.04
RANGE:	611.84		456.60		0.0		2300.00
MEAN:	66.88		67.81		51.91		113.33
RANGE:	199.35		164.10		149.98		562.03
MEAN:	146.25		94.79		86.38		41.59
RANGE:	272.85		162.38		294.19		113.58

TABLE 26

MARKET SIZE		LOCAL BROADCAST COSTS, ONE HOUR: 1972		LOCAL BROADCAST COSTS, ONE HOUR: 1976		LOCAL BROADCAST COSTS, ONE HOUR: 1976/1972	
(1) TRANSMITTER ONLY		MEAN:	161.89	MEAN:	123.76	MEAN:	113.09
		RANGE:	852.85	RANGE:	425.00	RANGE:	590.0
(2) XTR PLUS INTERCONNECT		MEAN:	202.17	MEAN:	179.39	MEAN:	161.45
		RANGE:	888.50	RANGE:	645.00	RANGE:	907.45
(3) XTR PLUS TAPE PLAYBACK		MEAN:	223.87	MEAN:	179.39	MEAN:	161.45
		RANGE:	926.31	RANGE:	645.00	RANGE:	907.45
(4) XTR PLUS FILM PLAY		MEAN:	206.22	MEAN:	179.39	MEAN:	161.45
		RANGE:	920.08	RANGE:	645.00	RANGE:	907.45
(1) TRANSMITTER ONLY		MEAN:	226.44	MEAN:	123.76	MEAN:	113.09
		RANGE:	851.74	RANGE:	425.00	RANGE:	590.0
(2) XTR PLUS INTERCONNECT		MEAN:	281.62	MEAN:	167.46	MEAN:	136.3
		RANGE:	881.00	RANGE:	505.00	RANGE:	590.0
(3) XTR PLUS TAPE PLAYBACK		MEAN:	296.18	MEAN:	179.39	MEAN:	161.45
		RANGE:	910.15	RANGE:	645.00	RANGE:	907.45
(4) XTR PLUS FILM PLAY		MEAN:	268.87	MEAN:	179.39	MEAN:	161.45
		RANGE:	907.45	RANGE:	645.00	RANGE:	907.45
(1) TRANSMITTER ONLY		MEAN:	67.44	MEAN:	43.58	MEAN:	35.8
		RANGE:	200.00	RANGE:	257.14	RANGE:	246.6
(2) XTR PLUS INTERCONNECT		MEAN:	40.73	MEAN:	28.66	MEAN:	23.7
		RANGE:	123.96	RANGE:	67.30	RANGE:	112.0
(3) XTR PLUS TAPE PLAYBACK		MEAN:	43.81	MEAN:	25.39	MEAN:	20.8
		RANGE:	104.85	RANGE:	77.03	RANGE:	100.7
(4) XTR PLUS FILM PLAY		MEAN:	41.43	MEAN:	24.73	MEAN:	22.8
		RANGE:	106.85	RANGE:	67.94	RANGE:	110.8

The ratios of the 1976 costs over the 1972 costs tell an additional story. The projected per cent of increase is also directly related to market size. Costs for 1976 are projected to increase at a more rapid rate for the larger markets. Consequently, not only do broadcast services cost more in large markets presently, but large market costs will also pull even further away from those incurred in the smaller markets for the same service.

Local Broadcast Costs--Over Operational Service Time

Operational service time categories were developed on the basis of the number of weeks per year, number of days per week, and number of hours per day of full-schedule operation. The reader is referred to the Procedure section for a review of those categories. Table 27 presents the mean scores and range of values for the 1972 and the 1976 costs, and the per cent of change scores. Operational service time is also directly related to local broadcast costs. As more full-schedule service is offered, the costs of one hour of service increase. In addition, these costs are generally projected to increase differentially, with the heavier service groups incurring even more costs in the future. The derivative of this relationship is that, for every increase in service, there is a resultant decrease in the usage potential of each activity-funding dollar. Thus, as stations commit resources toward the projected optimal of 52 weeks per year, 7 days per week, 16 hours per day of full-schedule operation, their ability to provide a broadcast product is curtailed, unless funding related to that product is also increased. As a systems analyst would phrase it, increased funding in the one area is dysfunctional to the other. Such an occurrence does not appear to be a corollary of Parkinson's law, i.e., costs increase according to available funding. It is, rather, the effected result of the increased

TABLE 27

OPERATIONAL TIMES		LOCAL BROADCAST COSTS, ONE HOUR: 1972			LOCAL BROADCAST COSTS, ONE HOUR: 1976			LOCAL BROADCAST COSTS, ONE HOUR: 1976/1972		
(1)	TRANSMITTER ONLY	MEAN:	66.17	1	MEAN:	97.11	1	MEAN:	109.99	1
		RANGE:	105.00	1	RANGE:	280.00	1	RANGE:	425.00	1
(2)	INTR PLUS INTERCONNECT	MEAN:	222.69	1	MEAN:	120.23	1	MEAN:	141.15	1
		RANGE:	237.50	1	RANGE:	303.00	1	RANGE:	305.00	1
(3)	INTR PLUS TAPE PLAYBACK	MEAN:	95.98	1	MEAN:	131.87	1	MEAN:	146.64	1
		RANGE:	199.00	1	RANGE:	200.00	1	RANGE:	546.00	1
(4)	INTR PLUS FILM PLAY	MEAN:	81.18	1	MEAN:	529.08	1	MEAN:	546.11	1
		RANGE:	200.00	1	RANGE:	891.50	1	RANGE:	881.00	1
TRANSMITTER ONLY		MEAN:	66.17	1	MEAN:	97.11	1	MEAN:	109.99	1
		RANGE:	105.00	1	RANGE:	280.00	1	RANGE:	425.00	1
(2)	INTR PLUS INTERCONNECT	MEAN:	276.18	1	MEAN:	120.23	1	MEAN:	141.15	1
		RANGE:	273.00	1	RANGE:	303.00	1	RANGE:	305.00	1
(3)	INTR PLUS TAPE PLAYBACK	MEAN:	191.32	1	MEAN:	156.22	1	MEAN:	161.64	1
		RANGE:	755.00	1	RANGE:	646.00	1	RANGE:	546.00	1
(4)	INTR PLUS FILM PLAY	MEAN:	861.00	1	MEAN:	894.00	1	MEAN:	881.00	1
TRANSMITTER ONLY		MEAN:	97.11	1	MEAN:	120.23	1	MEAN:	141.15	1
		RANGE:	280.00	1	RANGE:	303.00	1	RANGE:	305.00	1
(2)	INTR PLUS INTERCONNECT	MEAN:	109.99	1	MEAN:	156.22	1	MEAN:	161.64	1
		RANGE:	425.00	1	RANGE:	646.00	1	RANGE:	546.00	1
(3)	INTR PLUS TAPE PLAYBACK	MEAN:	123.96	1	MEAN:	131.87	1	MEAN:	178.72	1
		RANGE:	861.00	1	RANGE:	200.00	1	RANGE:	22.00	1
(4)	INTR PLUS FILM PLAY	MEAN:	104.85	1	MEAN:	894.00	1	MEAN:	881.00	1
		RANGE:	104.85	1	RANGE:	84.49	1	RANGE:	77.55	1

personnel and physical plant necessary for the provision of the greater, full-service operation.

SECTION FIVE: OPTIMAL FUNDING MIX

The Optimal Funding Mix section requested respondents to indicate the percentages relative to the sources of funding for regular operational costs, first-time capital costs, and replacement costs. Sources of funding were federal, state/local tax monies, and private funds including foundations and revenue. The analysis of the funding percentages was covered over all respondents and by the control variable of ownership. The results of these analyses are available as follows:

Optimal Funding Mix: Over All Respondents

Table 28 gives the mean percentages and range of values for the three funding sources, their average, and the three classes of costs over all respondents.

TABLE 28

	<u>Federal</u>	<u>State and Local</u>	<u>Private</u>
Regular Operation Costs	32.52	44.02	23.46
First-Time Capital Costs	62.98	23.79	13.23
Replacement Costs	40.23	35.16	24.61
Average	45.25	34.32	20.43

Table 28--Mean percentage values for optimal funding mix for regular operation costs, first-time capital cost, and replacement costs from federal, state, local, and private sources over all respondents.

As can be seen, federal sources are seen as the largest contributor for

that increased funding of, say, federal sources for first-time capital costs must be joined with increased funding from, say, state and local sources for regular operation costs in order for the federal increase to be of full functional value. While superficially this adjustment may seem to be a simple transfer of monies from one category to another, most tax funding is governed by legal restraints, which might result in operational starvation amidst a surfeit of capital riches. A systems approach, then, must be taken in such funding recommendations as might be made.

Optimal Funding Mix: Over Ownership

Table 29 presents the mean percentage values for the three funding sources, their average, and the four ownership groups. Community stations project the most balanced funding mix for regular operation costs, with approximately one-third of the funding coming from each of the three sources. University, School, and State licensees all show greater dependence on state and local tax monies than either of the other sources. The first-time capital costs' category shows the most agreement among the four ownership groups. All project federal sources as the prime funding source for this category.

Federal sources are also seen as primary for replacement costs by

67.

of values, and the per cent of change scores and range for the three cost categories and the three service groups. Operational service time is also related to costs. As service goes up, so also do costs. The relationship, however, appears to be more curvilinear than linear. That is, the difference between heavy-service stations and moderate-service stations is greater than the difference between moderate-service stations and light-service stations. This relationship, in turn, suggests that, as stations move to greater and greater full-service operation, the need for funds will escalate at a more rapid rate than the increase in service. Heavy-service stations estimate their budget needs for 1976 at almost four million dollars, which is approximately one million dollars more than the average of the other two groups. Part of this difference might be accounted for in the higher estimates of growth projected by the heavy-service stations. These stations show higher per cent of change scores in all three categories of cost, although the salary differences are not large.

Personnel, Operations, and Capital Equipment Costs 1972, 1976--Over Available

Facilities

	Private	22.84	29.00	17.27	25.86
Average	Federal	49.65	45.84	41.36	42.35
	State/Local	35.35	25.86	44.24	38.05
	Private	15.00	28.30	14.40	19.60

Table 29--Optimal funding mix from federal, state/local, and private sources according to different ownership groups.

University and Community stations. School and State stations project state and local monies as prime for replacement costs. State stations present the most balanced mix in this category. On the average, the federal sources are seen as the primary source of funds. The exception occurs for School System stations whose prime source is state/local funding. With the exception of Community stations, private sources are the smallest contributor in the optimal funding mix. Community stations show state/local monies as contributing least, and again strong support from private sources.

**SECTION SIX: PERSONNEL, OPERATIONS, CAPITAL EQUIPMENT, AND DEPRECIATION COSTS
1971, 1972, 1976**

In this, the last section of the questionnaire, respondents were asked to supply total salary costs, a breakdown of non-salary costs according to

TABLE 38

EQUIPMENT COSTS: 1972/1		BASIC	SOME OPTIONS	FULL OPTIONS
MEAN:	250263.04	43575.73	620718.92	
RANGE:	887361.00	2437610.00	1374796.00	
MEAN:	187481.87	300161.27	567907.25	
RANGE:	833744.00	1475369.00	1370346.00	
MEAN:	895406.10	734299.05	1698445.17	
RANGE:	2906953.00	4403591.00	5411458.00	
EQUIPMENT COSTS: 1976/1		BASIC	SOME OPTIONS	FULL OPTIONS
MEAN:	398695.27	621749.26	1178891.15	
RANGE:	1701160.00	1612424.00	2632000.00	
MEAN:	336503.18	626325.05	1476541.31	
RANGE:	944402.00	1718668.00	5090349.00	
MEAN:	1376714.29	779244.65	2577479.77	
RANGE:	3970000.00	2734000.00	8498000.00	
EQUIPMENT COSTS: 1976/1		BASIC	SOME OPTIONS	FULL OPTIONS
MEAN:	65.41	112.46	80.85	
RANGE:	186.24	328.68	135.76	
MEAN:	120.61	181.32	177.87	
RANGE:	393.44	423.01	309.74	
MEAN:	3501.71	8879.35	321.87	
RANGE:	65618.95	166654.19	1842.09	

nine separate departments, total capital equipment costs, and depreciation costs⁸. The analysis of these data is presented in four parts; 1) The analysis of the totals for salaries, non-salaries (the sum of the nine supplied values), capital equipment, and depreciation costs over all respondents; 3) the analysis of the total costs for salaries, non-salary, and capital equipment costs (see footnote 8) over the control variables of ownership, market size, operational service time, available facilities, and local production, and 4) the analysis of the nine non-salary cost categories over the control variable of ownership. These analytical sections follow.

Personnel, Operations, Capital Equipment, and Depreciation Costs 1971, 1972,
1976--Over All Respondents

Table 30 presents the mean scores (in dollars), the mean per cent of change scores, and range of values for the total costs relating to salaries, non-salary costs, capital equipment costs, and depreciation costs over all respondents. Salary and depreciation costs increase notably between 1971 and 1972. Non-salary and capital equipment costs decrease. In the latter case, a few respondents report very large capital equipment expenditures in 1971, as the very large value of the range for that category indicates. The change in non-salary costs (as we shall explore more thoroughly below) occurs primarily because of fewer expenditures⁹ in local programming.

For 1976, the table shows substantial increases being projected in all four categories in terms of dollars and per cent of change. The largest increase is projected for capital equipment costs. The heavy increases under capital equipment to the extent they represent the expansion of present

⁸The reader is warned that no University or State licensee, and a very few School System licensees reported depreciation values. This category is deleted in all subsequent control variable breakdowns.

⁹We can project expenditure differences rather than lower costs as the local production time decreases between 1971 and 1972.

TABLE 30

		1971		1972	
TOTAL RESPONDENTS					
PERSONNEL, OPERATION, AND CAPITAL EQUIPMENT COSTS:					
(1) TOTAL SALARIES		MEAN:	363987.87	MEAN:	401284.61
		RANGE:	1862588.00	RANGE:	2478358.00
(2) TOTAL NON-SALARY		MEAN:	317402.19	MEAN:	311061.72
		RANGE:	175501.00	RANGE:	1888199.00
(3) TOTAL CAPITAL EQUIPMENT		MEAN:	1556331.18	MEAN:	1011206.48
		RANGE:	10237367.00	RANGE:	5416522.00
(4) DEPRECIATION		MEAN:	393187.08	MEAN:	403242.29
		RANGE:	1622793.00	RANGE:	2020860.00

SUMMARY

This study reports the findings of a questionnaire relating to operational characteristics and the costs therein of public broadcast television stations. The questionnaire, developed by the Educational Television Stations Division of the National Association of Educational Broadcasters, was completed by 62 of 133 licensees of operational television stations. The questionnaire was composed of six parts: 1) Operational Time Schedules 1971, 1972, 1976; 2) Program Needs for Local Production, 1976; 3) Program Costs; 4) Local Broadcast Costs 1972, 1976; 5) Optimal Funding Mix (from federal, state/local, and private funds); 6) Personnel, Operational, Capital Equipment, and Depreciation Costs, 1971, 1972, 1976.

Analysis of the questionnaire data was conducted over all respondents, and over the control variables, ownership, market size, total operational budget, operational service time, available facilities, and hours of local production. These analyses were directed toward identifying facts relevant to the funding requirements of public broadcast stations. A summary of those

values for these nine, non-salary categories.

Inspection of the table shows that all the categories except local production, school service, and personnel development increase in costs between 1971 and 1972. Local production, school service, and personnel development show decreases in costs between these years. All categories show increases between 1972 and 1976. In order of projected dollar expenditures, technical, local production, programming, general and administrative, and school service are the major cost categories. In terms of per cent of change, the major categories are promotion, personnel development, school service, local production, and developmental.

Personnel, Operations, and Capital Equipment Cost 1972, 1976--Over Ownership

Table 32 presents the mean scores and range of variables for the cost

¹⁰The nine categories and their definitions were 1) Technical--Costs associated with repairs, maintenance, control, and technical operations. 2) Programming--All non-salary costs of acquiring and scheduling programs. 3) Local Production--Costs associated with the production of programs and programming materials at the local facility. 4) Instructional and School Services--All non-salary and non-production costs associated with these activities. 5) Developmental and Fund-Raising--Costs associated with the securing of grants and fund-raising events or activities. 6) Promotion--Costs associated with development of public knowledge of the station or its product. 7) Training and Personnel Development--Costs associated with internships, in-service, courses, technical, and administrative training provided to licensee employees. 8) General and Administrative--Supplies, communication, travel not otherwise assigned. 9) All Other Expenses--Any non-assigned, non-salary expenses remaining.

71.

4) Projections of program mix show movement toward a greater balance among local production (with the greatest increase), tape/film play, and interconnection time (with the smallest increase). These projections are seen as a move toward more localized programming.

5) In general, stations will decrease importance of national interconnection time, and increase regional interconnection and local production in total schedule mix.

6) Major market stations project, generally, a 52 week, 7 day per week, 16 hours per day, full broadcast schedule.

7) High-budgeted stations show less dependence in terms of time on national interconnection and more on local programming than all others.

SECTION TWO: LOCAL PROGRAM NEEDS, 1976

1) Over all stations, classroom instruction is the most important (in terms of time) program need followed by public affairs.

2) Different ownership categories show different rankings of local program needs: University stations rank public affairs and cultural as highest; Community stations--classroom instruction and public affairs; School System stations--classroom instruction and children's programs; State stations--classroom instruction and non-classroom instruction.

3) University stations project 16 hours of local programming; Community, 26 hours; School System, 31 hours; State licensees, 36 hours of local production.

4) Major market stations project substantially greater number of hours of local production than medium or small market stations.

TABLE 31

TOTAL RESPONDENTS		1971		1972		1976		1972/1976									
NON-SALARIAL COSTS:																	
(1) TECHNICAL																	
(1)	MEAN:	74618.39		77436.23		372017.34											
	RANGE:	793823.00		916742.00		1570472.00											
(2)	MEAN:	48619.69		50900.63		122224.87											
	RANGE:	930399.00		820704.00		2165875.00											
(3)	MEAN:	87974.20		63438.40		160463.31											
	RANGE:	941487.00		493740.00		1997200.00											
(4)	MEAN:	55602.58		51466.82		104476.63											
	RANGE:	255048.00		211320.00		1376500.00											
(5)	MEAN:	20575.79		30313.96		39993.88											
	RANGE:	103375.00		109233.00		174000.00											
(6)	MEAN:	12947.55		14728.07		25231.47											
	RANGE:	160515.00		137540.00		120000.00											
(7)	MEAN:	2553.90		2549.62		11866.43											
	RANGE:	7535.00		8009.00		49000.00											
(8)	MEAN:	47105.75		58028.98		10414.75											
	RANGE:	289746.00		348582.00		877378.00											
(9)	MEAN:	39372.25		44472.00		67204.33											
	RANGE:	233185.00		255484.00		534850.00											
						92.17											
						304.90											

categories of salaries, non-salary, and capital equipment over the four ownership groups for 1972 and 1976; per cent of change scores and their range of values are also given.

Table 32 shows the relative ranking of the ownership groups in terms of reported and projected budgets. University stations report the smallest total of the three cost values, followed by School System stations, Community stations, and, with the largest budgets, State licensees. In terms of projected 1976 budgets, Community stations estimate the greatest change in overall budget; School System stations project the least. Both Community and State licensees are projecting astronomical increases in their capital equipment categories. University stations are also projecting large increases in capital equipment expenditures. None of these three shows the desirable concomitant increases in the personnel category which suggest possible imbalance. School System stations, in projecting the least change overall, also present the most balanced growth pattern. Finally, all four groups project approximately the same growth in the non-salary category, which in the case of the University, Community, and State licensees--unless they presently have large amounts of unused funds--may not be sufficient for the increased equipment load.

Non-Salary Operations Costs 1972, 1976--Over Ownership

Table 33, 34, and 35 present the nine categories of non-salary costs over the four ownership groups, and give the mean scores, per cent of change scores, and range of values for 1972 and 1976. By ranking the dollar values of nine categories, one can get a picture of dominant cost factors over the four ownership groups. Using the 1976 projections, University stations rank local production, technical, school service, and all other as their top four categories. Community stations have school service, general and administrative, technical, and all other as their highest four. School System stations

TABLE 32

OWNERSHIP		UNIVERSITY		COMMUNITY		SCHOOL DIST.		STATE LICEN.	
PERSONNEL, OPERATION, AND CAPITAL EQUIPMENT COSTS: 1972									
(1) TOTAL SALARIES		MEAN: 198447.47		362940.47		424472.64		694096.92	
		RANGE: 543499.00		159672.00		1322489.00		236950.00	
(2) TOTAL NON-SALARY		MEAN: 130555.60		297524.42		255849.73		60839.42	
		RANGE: 399375.00		911387.00		1115283.00		143208.00	
(3) TOTAL CAPITAL EQUIPMENT		MEAN: 678172.71		970923.17		475644.00		190672.92	
		RANGE: 2408685.00		5414080.00		131251.00		494786.00	
PERSONNEL, OPERATION, AND CAPITAL EQUIPMENT COSTS: 1976									
(1) TOTAL SALARIES		MEAN: 380308.79		802236.00		63917.73		832259.18	
		RANGE: 1340000.00		294000.00		168160.00		1916884.00	
(2) TOTAL NON-SALARY		MEAN: 331164.21		641208.47		55653.64		147505.27	
		RANGE: 714200.00		182500.00		1718168.00		5092015.00	
(3) TOTAL CAPITAL EQUIPMENT		MEAN: 1024846.15		1462212.47		851168.27		2501203.82	
		RANGE: 3054000.00		7970000.00		248000.00		8303000.00	
PERSONNEL, OPERATION, AND CAPITAL EQUIPMENT COSTS: 1976/1									
(1) TOTAL SALARIES		MEAN: 68.02		135.47		52.30		63.86	
		RANGE: 214.59		307.40		87.57		258.33	
(2) TOTAL NON-SALARY		MEAN: 148.80		157.97		151.75		162.66	
		RANGE: 388.51		396.08		390.78		935.47	
(3) TOTAL CAPITAL EQUIPMENT		MEAN: 404.79		8334.90		50.84		1527.35	
		RANGE: 3884.79		65617.21		288.08		166847.26	

TABLE 33

JOINTSHIP		NON-SALARY COSTS: 1972		COMMUNITY		SCHOOL DIST		STATE LICEN	
(1) TECHNICAL		MEAN:	3078.64	MEAN:	51800.95	MEAN:	29194.73	MEAN:	21662.33
		RANGE:	106339.00	RANGE:	106052.00	RANGE:	65547.00	RANGE:	904362.00
(2) PROGRAMMING		MEAN:	30995.87	MEAN:	28985.76	MEAN:	37418.67	MEAN:	122943.18
		RANGE:	100915.00	RANGE:	107526.00	RANGE:	153388.00	RANGE:	812705.00
(3) LOCAL PRODUCTION		MEAN:	26259.00	MEAN:	59936.36	MEAN:	60993.80	MEAN:	11407.18
		RANGE:	146313.00	RANGE:	334272.00	RANGE:	324413.00	RANGE:	483481.00
(4) SCHOOL SERVICE		MEAN:	48094.00	MEAN:	61105.40	MEAN:	56305.37	MEAN:	5981.10
		RANGE:	771127.00	RANGE:	85171.00	RANGE:	182671.00	RANGE:	201426.00
(5) DEPARTMENTAL		MEAN:	4911.00	MEAN:	42197.37	MEAN:	17599.25	MEAN:	36885.00
		RANGE:	18146.00	RANGE:	108958.00	RANGE:	42227.00	RANGE:	50306.00
(6) PROMOTION		MEAN:	8873.17	MEAN:	14850.85	MEAN:	13041.67	MEAN:	23481.56
		RANGE:	50482.00	RANGE:	30311.00	RANGE:	59277.00	RANGE:	136557.00
(7) PERSONNEL DEVELOPMENT		MEAN:	2517.20	MEAN:	4305.00	MEAN:	94.50	MEAN:	2495.00
		RANGE:	4500.00	RANGE:	6873.00	RANGE:	85.00	RANGE:	4600.00
(8) GENERAL		MEAN:	14212.64	MEAN:	75198.00	MEAN:	49101.27	MEAN:	93067.36
		RANGE:	42750.00	RANGE:	344760.00	RANGE:	232288.00	RANGE:	249588.00
(9) OTHER		MEAN:	17040.60	MEAN:	55993.55	MEAN:	50888.25	MEAN:	36290.00
		RANGE:	48437.00	RANGE:	253647.00	RANGE:	246013.00	RANGE:	57500.00

TABLE 34

OVERSIGHT		UNIVERSITY	COMMUNITY	SCHOOL DIST	STATE LICEN
NON-SALARY COSTS: 1976					
(1) TECHNICAL		MEAN: 64343.57	96918.47	155501.27	439654.64
	RANGE: 125200.00	21800.00	1312357.00	1550324.00	
(2) PROGRAMMING		MEAN: 43162.21	69220.41	45718.27	38122.64
	RANGE: 117700.00	176000.00	185597.00	2156844.00	
(3) LOCAL PRODUCTION		MEAN: 102485.71	85968.19	129158.18	293259.80
	RANGE: 4900000.00	239491.00	594738.00	1990000.00	
(4) SCHOOL SERVICE		MEAN: 492088.33	163754.73	62313.30	126219.00
	RANGE: 128500.00	1376000.00	199233.00	287791.00	
(5) DEVELOPMENTAL		MEAN: 128901.91	68583.72	18555.25	28750.00
	RANGE: 32200.00	174000.00	73800.00	40000.00	
(6) PROMOTION		MEAN: 17649.57	31711.07	28216.00	23030.82
	RANGE: 64000.00	70000.00	94154.00	121970.00	
(7) PERSONNEL DEVELOPMENT		MEAN: 9844.44	16322.73	10000.00	9596.33
	RANGE: 22400.00	49000.00	34000.00	10000.00	
(8) GENERAL		MEAN: 25444.57	129828.72	69566.91	234060.50
	RANGE: 170350.00	692000.00	352385.00	853878.00	
(9) OTHER		MEAN: 45366.67	92867.71	55057.56	50212.86
	RANGE: 172000.00	533850.00	293680.00	650000.00	

have technical, local production, general and administrative, and school service as the first four ranks. The top four categories for State licensees are technical, programming, local production, and general and administrative.

While the dollar figures are useful in showing the dominant cost categories, they are, perhaps, less useful than the per cent of change scores for making statements on future priorities. In fact, the relative ranking of the change scores gives a good indication of the areas of the perceived greatest need. University stations rank promotion, developmental, local production, and personnel development as the major area of budget growth. Community stations rank promotion, school service, local production and developmental as their first four categories. School System stations show personnel development as their leading need, followed by school service, promotion, and local production. State licensees appear to have the most balanced growth projections among the nine categories as the change scores are relatively even. Their top four ratings are personnel development, programming, local production, and technical.

Personnel, Operations, and Capital Equipment Costs 1972, 1976--Over Market Size

Table 36 illustrates the three cost categories and three market groups, and gives the 1972 and 1976 mean cost scores and their range of values, and the per cent of change scores and range of values. As we have seen before, market size is related to costs. As market size goes up, so also do costs. Major market stations project million dollar expenditures in all three categories for 1976, with the greatest growth occurring in capital equipment.

Personnel, Operations, and Capital Equipment Costs 1972, 1976--Over Operational Service Time

Table 37 shows the 1972 and 1976 mean scores for costs and their range

TABLE 36

MARKET SIZE		SMALL	
PERSONNEL, OPERATION, AND CAPITAL EQUIPMENT COSTS: 1972			
		MAJOR	MEDIUM
(1) TOTAL SALARIES			
	MEAN:	812328.50	387984.57
	RANGE:	247835.00	1066504.00
(2) TOTAL NON-SALARY			
	MEAN:	604633.83	340798.57
	RANGE:	1484931.00	1273425.00
(3) TOTAL CAPITAL EQUIPMENT			
	MEAN:	1545516.10	988579.00
	RANGE:	5414080.00	4947686.00
PERSONNEL, OPERATION, AND CAPITAL EQUIPMENT COSTS: 1976			
		MAJOR	MEDIUM
(1) TOTAL SALARIES			
	MEAN:	1230022.75	733893.37
	RANGE:	2944000.00	21233396.00
(2) TOTAL NON-SALARY			
	MEAN:	1090442.75	962429.00
	RANGE:	4065000.00	5243049.00
(3) TOTAL CAPITAL EQUIPMENT			
	MEAN:	1959806.42	1450222.65
	RANGE:	7970000.00	8612000.00
PERSONNEL, OPERATION, AND CAPITAL EQUIPMENT COSTS: 1976/1			
		MAJOR	MEDIUM
(1) TOTAL SALARIES			
	MEAN:	125.45	88.49
	RANGE:	287.15	329.28
(2) TOTAL NON-SALARY			
	MEAN:	129.30	181.90
	RANGE:	182.68	935.47
(3) TOTAL CAPITAL EQUIPMENT			
	MEAN:	8068.10	8934.90
	RANGE:	65616.05	166647.26
			240.18
			3884.79

TABLE 37

OPERATIONAL TIMES				PERSONNEL, OPERATION, AND CAPITAL EQUIPMENT COSTS: 1972			
				LIGHT		MODERATE	
				HEAVY		HEAVY	
(1) TOTAL SALARIES	MEAN:	336363.85	RANGE:	357158.08	1091791.00	623414.18	2412446.00
(2) TOTAL NON-SALARY	MEAN:	227175.90	RANGE:	295001.81	1259485.00	501541.18	1441588.00
(3) TOTAL CAPITAL EQUIPMENT	MEAN:	740218.17	RANGE:	1142905.08	5411377.00	1155326.91	4947686.00
PERSONNEL, OPERATION, AND CAPITAL EQUIPMENT COSTS: 1976				LIGHT		MODERATE	
				HEAVY		HEAVY	
(1) TOTAL SALARIES	MEAN:	632999.43	RANGE:	569645.84	2944000.00	1046997.87	2098396.00
(2) TOTAL NON-SALARY	MEAN:	528447.48	RANGE:	632825.68	4065000.00	1537424.00	301112.00
(3) TOTAL CAPITAL EQUIPMENT	MEAN:	1059050.00	RANGE:	1710515.60	7984000.00	1356285.44	8498000.00
PERSONNEL, OPERATION, AND CAPITAL EQUIPMENT COSTS: 1975/1				LIGHT		MODERATE	
				HEAVY		HEAVY	
(1) TOTAL SALARIES	MEAN:	89.39	RANGE:	74.36	328.68	116.87	260.68
(2) TOTAL NON-SALARY	MEAN:	146.23	RANGE:	125.58	417.39	271.54	427.09
(3) TOTAL CAPITAL EQUIPMENT	MEAN:	800.65	RANGE:	6715.16	5414.77	908.28	166654.19
							65617.21

full-option stations. As one might expect, those stations with fewer facilities available are projecting large increases in their capital equipment costs. They are not, nevertheless, projecting similarly large increases in either the salary or the non-salary categories. A particularly severe imbalance occurs with the basic stations whose total dollar expenditure in 1976 is projected to be almost twice as large as the some option stations estimate. The basic stations' salary and non-salary estimates, however, are only 60 per cent of the some option stations' estimates.

SECTION FOUR: LOCAL BROADCAST COSTS 1972, 1976

- 1) Local broadcast costs are projected to increase on the average of 7.5 per cent per year between 1972 and 1976.
- 2) University stations report the lowest cost of all ownership groups.
- 3) Broadcast costs per hour of service, and the rate of increase of these costs is directly related to market size.
- 4) Stations providing more operational service time have higher costs per hour of service time.

SECTION FIVE: OPTIMAL FUNDING MIX

- 1) Stations report different major funding sources for different budgetary needs. Federal sources are seen as the major overall contributor.
- 2) Different categories of owners rank the funding sources differently. School System stations rank state/local sources as highest; all others rank federal highest. Community stations rank state and local lowest; all others rank private sources lowest.

SECTION SIX: PERSONNEL, OPERATIONS, CAPITAL EQUIPMENT, AND DEPRECIATION COSTS--

1971, 1972, 1976

- 1) Personnel, operations, and capital equipment costs are projected to rise 1700 per cent in implementing an optimal plan for 1976.
- 2) Stations in major markets report and project greater personnel, operations, and capital equipment costs.
- 3) As operational service time increases, personnel, operations, and capital equipment costs increase more rapidly.
- 4) Stations with more facilities report and project higher personnel, operations, and capital equipment costs, and higher rates of increase in these costs than stations with fewer facilities.

CONCLUSIONS

From the findings of this study, the following conclusions, presented according to each utilized control variable, seem warranted:

ALL RESPONDENTS

Public television stations present a complex picture of sometimes interacting, sometimes competitive, aims, roles, and resultant needs. Each licensee is a separate entity, with requirements fashioned from the unique mix of characteristics which are its own. With such diversity of purpose and need, categorical funding, applied with little flexibility for local option, would appear to be ruinously inefficient. Public television stations project funding requirements of a substantial nature. The task of marshalling those funds, and their subsequent renewal appears highly dependent on the full development of information leading to proper funding procedures and accountability measures. Unfortunately, the diversity of public television, which is truly a boon to its many publics, is an impediment to this full development. It is an impediment because diverse purposes are often competitive purposes and competition often leads to the management of information for short term gains.

OWNERSHIP

Ownership plays an important part in both the definition and operation of public broadcast stations. Different ownerships show various program source mixes, differential allocation of available time to different program types, and a variety of cost characteristics.

In general reference to program source mix and costs, University stations will have the lowest costs and the least local programming service; State stations will have the highest costs and the greatest local service.

The different emphasis on the different program types projected by the ownership groups will have impact on dissimilar audience groups, and vary widely in their respective costs. University stations with their projected emphasis on public affairs and cultural broadcasting will have the highest per-hour, locally produced programming costs. The appeal of such programming, as produced in the past, has been relatively nebulous and narrowly based.

Consequently, the return support for this programming, whether in terms of revenue or attending audiences, is unpredictable.

State stations with their emphasis on classroom and non-classroom instruction will have, all other things being equal, the lowest per-hour programming costs. The appeal of this programming is definitive and limited to its specialized audiences. The return support is highly predictable.

School System stations show an almost stereotypic emphasis on child-directed programming, the appeal of which is definitive, limited to a specifiable audience, and with a predictable return.

Community stations, perhaps with their greater dependence on generated revenue, have projected a programming combination with a broader audience base. With their emphasis on classroom instruction and public affairs programming, they will have relatively moderate production costs, both specifiable and non-specified audiences, and predictable and non-predictable return characteristics.

Stations related to academic institutions are less likely to provide year-round, 7 day per week, full schedule operation, either currently or in their projections for the future. It is likely that such stations would have

special costs attached to a full time schedule, making such a schedule difficult or unattractive to obtain. Funding specific to this problem may be necessary.

The particularly low cost estimates provided by University stations as a group signal them for special considerations. Of all possible explanations for these estimates, the most likely appears to be that such stations have not developed accounting procedures which fully recognize the contribution of the parent institution. Funding, based on total operational budgets cannot, therefore, be properly calculated.

MARKET SIZE

Stations in larger markets have costs which are specific to their location. These location-specific costs mean that, in terms of cost efficiency, large market stations will be less productive per dollar of funding than stations in smaller markets. In addition, the projected rates of change are such that large market stations will decline further in cost efficiency, relative to smaller market stations, over the next four years.

TOTAL OPERATIONAL BUDGET

Perhaps the most important finding for this control variable is the initial support for the existence of a critical funding point relevant to local production. Only the highest-budgeted stations show a substantially greater number of local production hours. One can speculate, then, that the demands of local production are such that a relatively high level of funding is required before a substantive program of production can begin. Gradual increases in funding will not result in gradual increases in local production. Consequently, funding for production, to have any effect on the output of coverage public stations, will have to be massive. In the absence of massive funding, accountability procedures based on productivity are meaningless.

These, in turn, suggest that such funds that are available may be more efficient if directed elsewhere in the public station's budget.

OPERATIONAL SERVICE TIME AND AVAILABLE FACILITIES

Operational service time and available facilities are both directly related to cost factors. As service increases or as capacity increases, the cost for the same unit of time or product also increases. These relationships exemplify the need for a systems approach to funding. That is to say, that funding adapted to a single area only is dysfunctional to the other areas of the same operation. Funding applied to capital equipment, for example, must also include funding for personnel and non-salary costs, if the equipment funding is to be efficient in terms of productivity.

This requirement for a systems approach can present particular difficulties when the sources of funding are varied and independent, as in the case of public broadcasting. When funding for capital equipment is projected from federal sources, other sources must be properly managed to provide for the increased requirements of the other areas. In the absence of this management, under-utilization or other abuses even more destructive are the likely result.

APPENDIX A

EDUCATIONAL TELEVISION STATIONS

A-1

OPERATIONAL QUESTIONNAIRE-- OCTOBER, 1972

BROADCAST RESEARCH CENTER, OHIO UNIVERSITY, FOR ETS/NAEB

LICENSEE:

Call Letters:

"FULL SCHEDULE OPERATION"

Number of weeks per year

What Was Recorded
in 1971What You Sent
in 1972The Optimal Plan
For FY 1976weeksweeksweeksNumber of operating days during
a full schedule weekdaysdaysdaysNumber of broadcast hours per
full schedule dayhourshourshours

A. Hours of local production

hourshourshours

B. Total tape or film hours

hourshourshours1) Per cent of repeats of
local productionNA %NA %%2) Per cent interconnect
delays and repeatsNA %NA %%3) Per cent from syndication
or "library"NA %NA %%100% tape/film
hours100% tape/film
hours100% tape/film
hoursC. Interconnection--"Real Time"
(not delayed)--hours per dayhourshourshours

1. Per cent regional

%%%

2. Per cent national

%%%

3. Per cent other

%%%100%
Interconnect
hours100%
Interconnect
hours100%
Interconnect
hoursD. If your weekend schedule would differ substantially from above, please
complete the following page.

WEEKEND OPERATION

OPTIMAL PLAN

FISCAL YEAR 1976

Number of broadcast hours per full schedule day

A. Hours of local production

B. Total tape or film hours

1) Per cent of repeats of local production

2) Per cent interconnect delays and repeats

3) Per cent from syndication or "library"

Saturday

Sunday

100% tape/film hours 100% tape/film hours

C. Interconnection--"Real Time" (not delayed)--hours per day

1. Per cent regional

2. Per cent national

3. Per cent other

hours hours

% %

% %

% %

100% Interconnect Hours 100% Interconnect Hours

PROGRAM NEEDS FOR LOCAL PRODUCTION

FISCAL YEAR 1976

Hours per Week

Local public affairs

Examples: _____

Instructional programs not for classroom

Examples: _____

Cultural programs

Examples: _____

Local news (newscasts only)

Instructional programs for classrooms

Examples: _____

Children's programs

Examples: _____

Professional and inservice training

Examples: _____

Other--please specify

Examples: _____

Please cost out the following program types. Your cost estimate should include all fixed (or indirect) costs and variable costs. Base your costs on what you feel is the level of production required to attract and satisfy your own local audience. Work sheet forms are included in the back of the questionnaire for both fixed and variable costs.

<u>Total Fixed Costs</u> (hourly fixed cost x number of hours of operation)	<u>Total Variable Costs</u>
---	-------------------------------------

A) Current Event Coverage _____

Remote coverage of a local school board meeting. Include set-up and breakdown time.

B) Inschool Credit Course _____

A series of 32 one-half programs for a 10th grade civics course. Although normally a part of such series, do not include the cost of instructional guides, implementation personnel, and other ancillary items.

C) Social Issues _____

One half-hour documentary about a local environmental problem.

D) Public Access Service _____

A service program in which minimal facilities are provided for individual or groups to present their views or skills. Only facilities are needed; no production support.

LOCAL BROADCAST COSTS

	<u>Present</u> <u>Average</u>	<u>Optimal FY 1976</u> <u>Average</u>
One Hour Broadcast XMTR Only	\$ _____	\$ _____
One Hour Broadcast Plus Inter-connect Costs	\$ _____	\$ _____
One Hour Broadcast Plus Tape Play-back Costs	\$ _____	\$ _____
One Hour Broadcast Plus Film Play Costs	\$ _____	\$ _____

OPTIMAL FUNDING MIX:

What do you consider the best funding mix under your optimal plan for each of the following categories?

	<u>Federal</u>	<u>State & Local</u>	<u>Private</u>
A. Operation Costs (regular annual income)	_____ %	_____ %	_____ %
B. 1st Time Capital Costs	_____ %	_____ %	_____ %
C. Replacement (Depreciation) Costs (regular annual income)	_____ %	_____ %	_____ %

PERSONNEL, OPERATIONAL COSTS

AND

CAPITAL EQUIPMENT COSTS

A. Operational Costs	Recorded	Reported	Needed For FY 1976
	1971	For 1972	Optimal Plan
1. Personnel			
Total of salaries	\$ _____	\$ _____	\$ _____
2. Operational Costs Other Than Salaries			
Technical	\$ _____	\$ _____	\$ _____
Programming	_____	_____	_____
Local production	_____	_____	_____
Instructional and school services	_____	_____	_____
Developmental and fund raising	_____	_____	_____
Promotion	_____	_____	_____
Training and personnel development	_____	_____	_____
General and administrative	_____	_____	_____
All other expenses	_____	_____	_____
B. Capital Equipment Costs	\$ _____	\$ _____	\$ _____
C. Annual Depreciation	\$ _____	\$ _____	\$ _____

Does this list of cost categories miss a major item(s) in your personnel, operational, or capital equipment budgets? Yes No

If yes, please indicate the category(ies)

COMMENTS

Your comments concerning the questionnaire, problems you may have had, reservations or assumptions you made, or ideas about the subject matter are very useful and appreciated.

One last question: We asked you to make some projection about the future. How confident do you feel about those projections?

Section I **Not very confident** 0 1 2 3 4 5 **Very confident**

Section II **Not very confident** 0 1 2 3 4 5 **Very confident**

Any comments on these ratings?

Thank you for your time and effort.

NARRATIVE

YOUR PRESENT OPERATION AND YOUR OPTIMAL PLAN
FOR FISCAL YEAR 1976

The questionnaire asks you to report the conditions of your present operation and to project an optimal plan of operation for your station assuming you had your druthers (and funding).

The questions generally follow the format of the CPB Annual Questionnaire and the current data requested can be directly transferred. To provide historical perspective, we have listed the data recorded from your responses to the 1971 CPB questionnaire where available.

The optimal plan should reflect your idea of the best operation format for your various viewing publics. It will, of course, take into account your specific market conditions, the services you want to provide and the needs of the community within the three year time frame.

PAGE 1--TIMES OF OPERATION

Page One asks you to indicate the number of weeks in a year and the number of days in a week of full schedule operation. For many stations, full schedule operation occurs between September and June on a Sunday through Friday basis. You are then asked to break a full schedule day into the number of hours of local production, tape and film hours, and interconnect time.

PAGE 1a--WEEKEND SCHEDULE

If you feel your optimal plan would call for a substantial change in the operation mix, this page is provided to show those changes. If the schedule of types of operations (not program types) would be about the same for weekends, go right on to Page Two.

PAGE 2--PROGRAM NEEDS FISCAL YEAR 1976

This section asks you to project your programming needs for 1976. General categories are provided as a guide. The projected programming should, of course, relate to local conditions of market and audience.

PAGE 3--LOCAL PRODUCTION COSTS

This page asks you to cost out four program types. It asks you to calculate only the production costs (fixed and variable) and not costs for promotion, implementation, and so forth. Worksheets are provided in the back of the questionnaire as an aid.

PAGE 4--LOCAL BROADCAST COSTS

The first part of this page asks you to estimate the costs of broadcast time under present conditions and for your optimal plan. Cost should include fixed and variable elements. The second part seeks your ideas about the optimal funding mix of regular federal monies, state and local tax funds, and

private monies for your optimal plan. Federal monies refer to regular annual grants which can be counted on as a ordinary funding source. They do not include project federal grants or one time grants for a specific purpose. Please note the three categories of capital costs, replacement cost, and operation costs. You may well wish to change the funding mix for each of these categories.

PAGE 5--COSTS

The data requested here will provide a solid picture of what it costs to run a station, the operational costs are broken down into the categories used by CPB to make the projection more comparable. Capital equipment costs refer to costs of land, buildings, structures, machinery, equipment, facilities, hardware, automotive gear, office equipment, and major improvements. The annual depreciation item refers to expenditures due to wear, age, obsolescence in equipment and property.

PAGE 6--COMMENTS

The last page of the questionnaire asks for your comments. Your thoughts and feelings after working through the questionnaire are most useful to us. (As the TV ad goes: "Thanks, we needed that.") Please be as generously complete as you can in recording them.

The last item asks you to give us a confidence rating for your projections. This confidence rating reflects the certitude that you have in the projections we have asked you to make. A comment or two on these ratings would also be very helpful.

LONG FORM

Don't forget to take a look at the examples from the long form and to respond to the questions on that page.

If you have any questions about any of the items, please call Jim Anderson at the Broadcast Research Center, Athens, Ohio Area Code 614-594-4574.